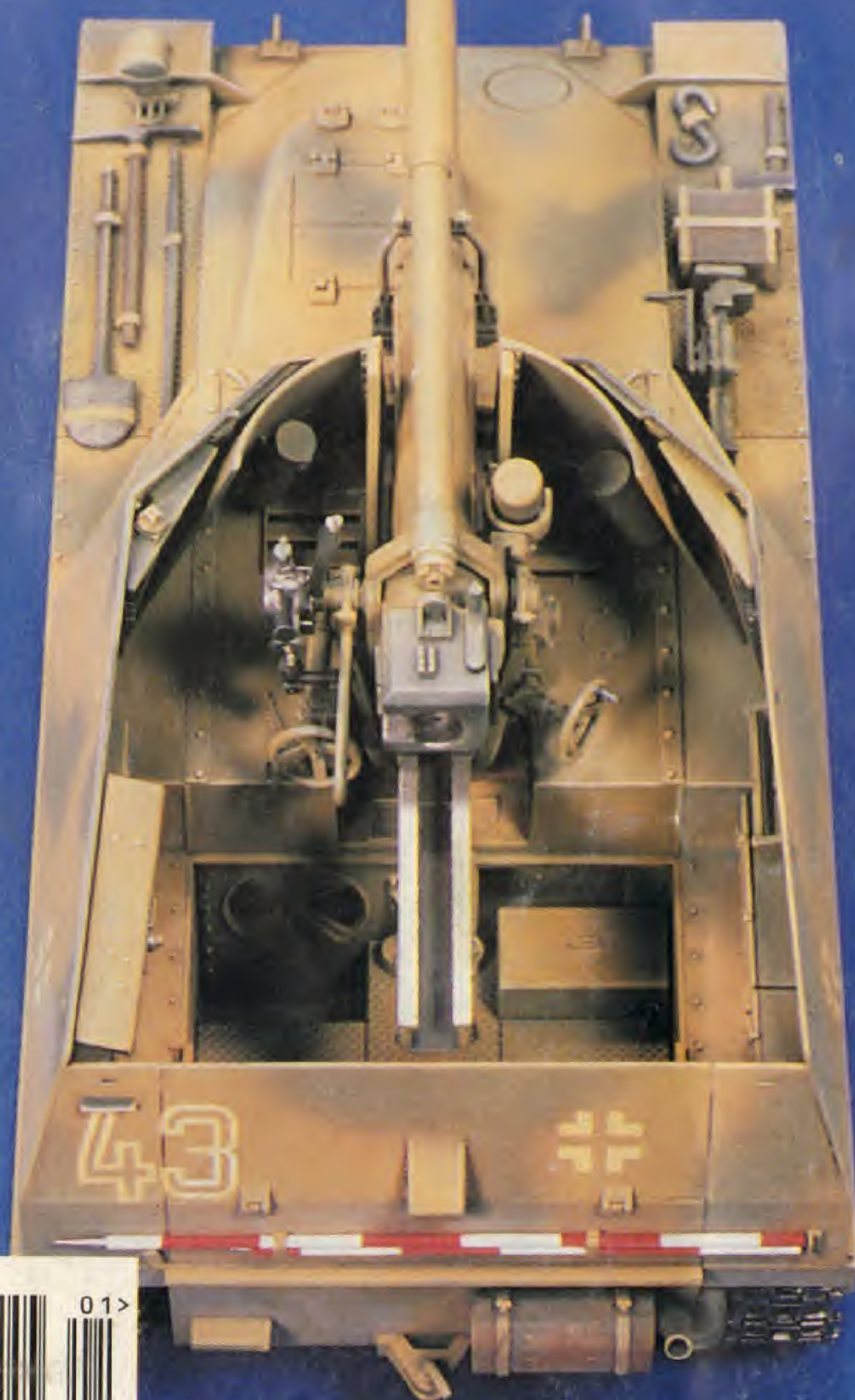


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Wespe Anyone? Tamiya's tasty new tomato



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Tamiya's new StuG III G

**The DML Sherman
POA Flamethrower**

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No. 8
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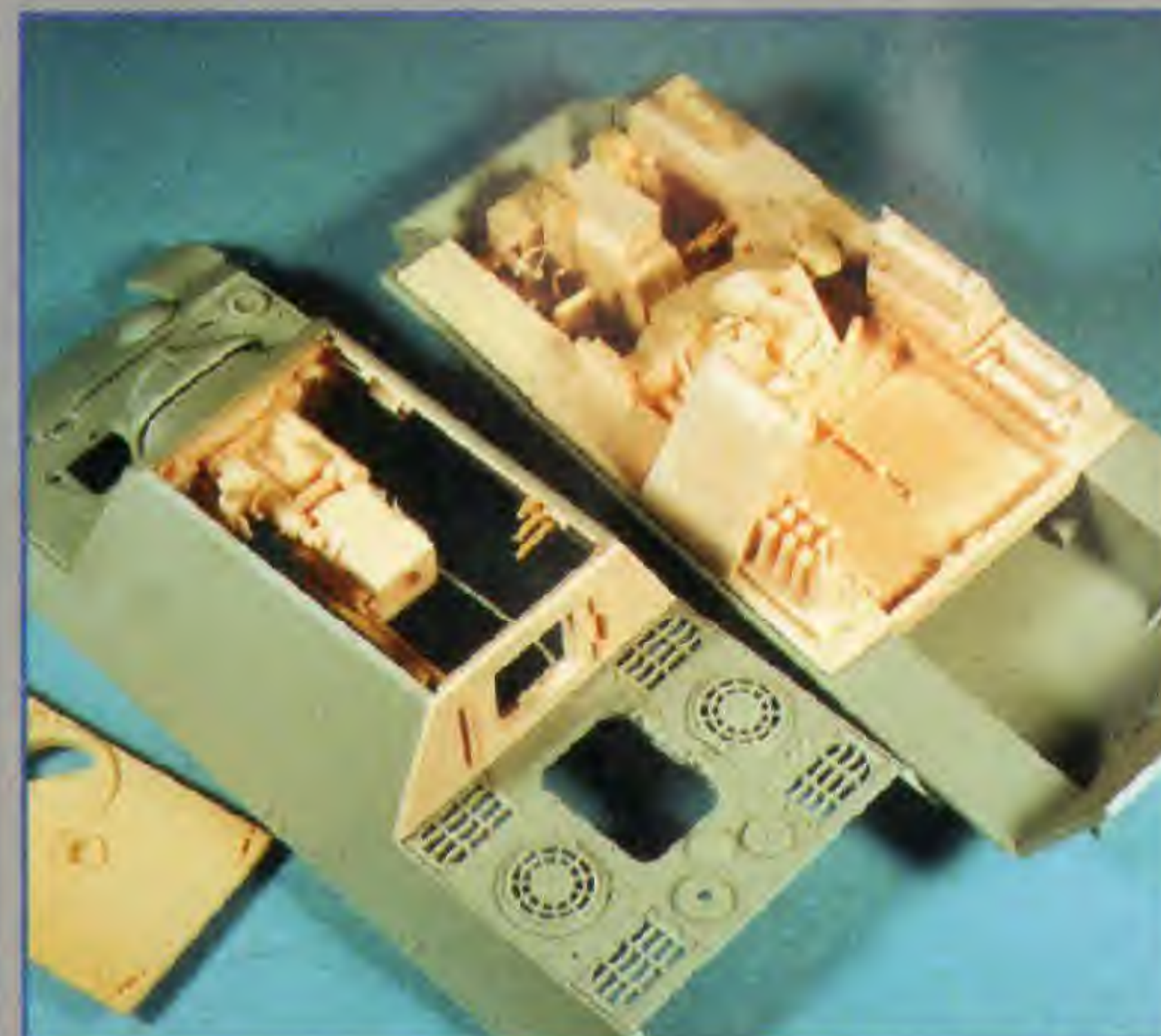
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C O N T E N T S

In Review

- Wespe Anyone?** 22
We slam dunk the very new Tamiya kit.
- Flame-On** 26
The hot (and we're not kidding) DML Sherman HVSS POA-CWS-H5 flamethrower tank.
- Death by Sturmgeschutze** 29
Tamiya adds its early G to the StuG line-up.
- Diorama Showcase: Summer in White Russia, 1941** 32
Masahiro Doi's cool multi-vehicle diorama. Hey everybody! Come quick—it's in color!
- Movin' Scale Dirt** 38
Gettin' down and dirty with the gutsy Tank Workshop bulldozer.
- The Tale of Two Toldi's** 42
Mini-Art Studio's schizophrenic Hungarian fast tank.
- My Funny Valentine, Part Deux** 46
It's back. But this time it's styrene and it means it.
- The M113 from Vulcan** 50
MiniCraft's new little buzz saw.
- The Pershing Project, Part One: The Super Pershing** 53
Pete bites into MB Model's resin conversion set.

Features

- The Mail Bag** 3
The readers speak.
- Short Takes** 6
And we thought it was going to be quiet for while...
- The Sherman: A Fragmented Look** 15
We finally get to part three: The Tracks.
- Double Takes** 19
Mini Reviews of new versions of previous releases. This time it's the DML Panzer III M/N and the Sturmpanzer III.
- Mini-Men** 57
A peek at what's new on the figure front.



Page 26



Page 38



Page 53



ON THE COVER:

Tamiya's new Wespe kit, pretty much straight out of the box. It's an all new kit and it looks like it's going to be a best seller. Rumor has it that the Wespe is already sold out in Japan. Get them while their hot! The review starts on page 22.

To the right of the Wespe is a selection of this issues kit line-up: the Tamiya StuG G, early; the DML Sherman POA and the Minicraft Vulcan.

Also don't forget to check out our new color diorama feature starting on page 32.

From Your Editor



Super detailing. That's quite a phrase. Think of it. Compare your average tank model today to any other type of scale model. You've seen them: architectural models, industrial models, etc. In comparison, a plastic kit is "super detailed" right out of the box. The level of complexity in our little domain has become quite high.

But to some, that's simply not enough. We super detail our super detailed kits. Recent advances have propelled us into areas we never even thought of—much less dared to try.

It started out innocently enough. A few resin bits here, a photo-etched set there. Then, over the last five years this market just exploded. You can now purchase an almost complete and total scale replica of a miniature tank.

There are several interior sets on the market now and they are pretty complete with engines, transmissions, and all the other gear need to replicate the innards of the tank. Now you can have scale accuracy through and through.

Along with your full interior, you can add link-to-link tracks (workable if you want—choose either metal or plastic), scale thickness fittings such as light guards, tool clasps and cable clamps. We got wing



nuts, J-bolts, hex nuts, screw heads and functioning hinges. I remember once showing a Grandt line bolt set to a non-modeling colleague. He didn't even see it. It was so small it just wouldn't register in his brain. He thought I was nuts (and that was my favorite part).

There's great precedence for all this in the model railroad industry. Armor modeling and model railroading are actually closely related. Most of the after market and super detailing techniques were pioneered by train geeks. Resin casting, solid brass and etched brass, add-on bolts and nuts, and even weathering all stemmed from railroad modeling. Shep Paine gave our hobby a huge kick in the pants when he introduced a whole generation to the joys

of running rampant through the railroad detailing section of your local hobby shop. At the time he called it "gizmology." The idea was to use all of those wonderfully detailed brass and plastic railroad parts to emulate the fine detail we didn't yet have available. Things have changed since then, with more and more stuff coming out, but most of us still look to Grandt Line for nuts and bolts. Grandt Line produces thousands of plastic items—exclusively for model railroading—and many have a place on your next tank model.

I wonder sometimes, where all this is headed. We've worked our way into complete replicas (although they're not exactly common yet), but what could be next?

To beat that train analogy to death, look what's happened there. They evolved through all the resin, brass and plastic detailing parts just like we are now. The ultimate expression of their art is the solid brass engines and tenders that sell for around a thousand bucks. If you've never scoped these babies out, take a real good look next time you pass by that section. They are exquisite, fully detailed replicas. Really something to see. And when you look at them, imagine that it was a... T-A-N-K.

We could be moving in that direction. To create a full replica, you still have to go to several wells; resin, photo-etched and plastic. But the day may be coming when all this is available in one box. We're not talking mass production here, but there still is uncharted territory out there. I know it won't be for everybody, but I still can't wait.

Times, they are a changin'

This issue sees an important change in the way we have been doing things. First of all, we have done away with the confusing volume numbers and have gone over to a simple numbering system. Welcome to plain number eight. Now isn't that easier?

Secondly, and most importantly, we've turned over all subscription functions to RZM Imports. Conspiracy theorists can rest easy, we haven't sold the magazine or changed addresses, we've just contracted an outside source to do a much better job maintaining and cultivating our extensive list of subscribers. The idea is to allow us to completely concentrate on the business of creating MMiR.

RZM is well qualified for the job. They currently represent several military-related magazines, such as *Wheels and Tracks*, *After the Battle*, *Steelmasters*, *Figurines* and *Militaria*. They are also the U.S. importer of *Model Graphix* and *Historie & Collections* publications. What this means to you is a faster, more effective response to all subscription related matters. Their highly capable staff is on-hand to answer all of your questions. RZM also offers complete (and I mean complete) credit card services, so that both new and old customers can enjoy the convenience of using their MasterCard, VISA, American Express or Discover cards right over the phone. You can contact them at 1-203-264-0774 from 10 a.m. to 6 p.m. EST. If you're placing a credit card order you can call 1-800-562-7308 during those same hours. This number is reserved for those customers which are using their credit cards, so please don't call with questions. The "203" line is your hotline for questions and information.

And last, but not least, we have finally added color to the inside of the book. This will gradually increase as we go along. We hope you like it!

The flurry of activity has also coincided with an increase in both subscription and single issue prices. We are still catching up from the last postage increase as well as a substantial increase in paper costs. Admittedly, the book is twice as big, but I think we might be in the wrong line of work. Maybe we should start a paper company...

Anywho, we are still here patiently plugging away and can always be reached at the address at right. Editorial questions, comments, bitches, gripes, etc. can still be directed this way. Try us at our e-mail address too. It's a very easy way to reach us (cheap too).

Thanks for reading and enjoy!

—Pat Stansell

Miniatures[™]

IN REVIEW

Who To Blame

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The Mail Sack

We like cake too

I saw your ad in FSM and thought I'd give you a shot. Boy am I glad I did!

It turned out to be worth the wait!

Your magazine is the bee's knees, it really is packed with the stuff in which I am interested. I especially like the no airplanes char-

acter you use to close out articles. Nice touch!

Couple of thoughts about Pat Stansell's editorial. Right on man! I absolutely agree that we need greater variety. The only thing about Pat's article is that he never mentioned that the quality of fit has improved exponentially. I guess I want to have my cake and eat it too! Yes! I really want more obscure kits, but I find it hard to criticize model companies that produce kits that fit together almost perfectly. I hardly ever use fillers any more. I couldn't say that ten years ago. Flash is almost non-existent today. I remember buying injection molded kits that looked like they were vac-formed.

Perhaps the answer is the number of new releases per year. Tamiya and Italeri release only three or four armor kits a year. With new competition from DML, AFV Club, and Academy/Minicraft, who seem to produce more, perhaps we will see more releases leading to more variety.

I personally would like to add a kit to Pat's wish list, an M-103. The M-103 fascinates me because you almost never see any photos of it. For me, it was sort of on the fringes of my consciousness. I knew something with the shape of the M-103 existed, but I could never find any actual reference on it. Enlightenment came when I made my pilgrimage to the Patton Museum in Fort Knox, Kentucky. They've got one there—I was in Nirvana. Now I have to figure out how to scratch build one!

Thanks again,

—Gregory M. Garand

Thanks Greg. You read it here first. We're giving you credit for the first M-103 that gets released.

Greg also offered up the following, which we thought you'd find amusing—we did. We await Mrs. Garand's top ten list...

Greg's Top Ten (or so) Ways To Spot A Serious Armor Modeler

1. *Modeler's thumb: his thumb is always cut up in little checker patterns from cleaning flash off kits.*
2. *He has a pair of channel-lock pliers set to the size of those damned bottles of Testor's paint next to his work bench.*
3. *Suffers from withdrawal if not exposed to either paint thinner or plastic glue in a 24-hour period.*
4. *Has broken fingers from slamming his copy of MMiR in the drawer when his boss comes in the room.*
5. *Has caused at least one accident outside of a VFW Post when he stopped to see a tank he's never seen before.*

6. *Calluses on his hand from trying to open those damned Testor's paint bottles.*
7. *None of his friends will let him near their guitars because he keeps stealing the strings to make whip antennae.*
8. *Has pawned at least one small child in order to afford a pilgrimage to the Patton Museum in Fort Knox, Kentucky.*
9. *Keeps forgetting that when you get both super glue and accelerator on your finger at the same time, you get burned.*
10. *Calls in sick to work at least five times a year because, well, he'd just rather be modeling than anything else.*
11. *Is able to tell you that super glue has no taste, but it does strange things to your tongue.*

✉

The Falke and the Snowman

I just wanted to drop you a line to make a correction on a mistake I made in the article on the ZG 1221. In the section on colors and markings I stated that the "Sperber" shown in a photograph in Spielberger's book had "Balkenkreuze" on the upper hull front. This is wrong and having spent hours studying it, I was quite aware that there are no markings on it.

On a positive note, there's been some new info that's become available since I wrote the piece. Achtung Panzer, No 4, "Panther, Jagdpanther & Brummbaer" has some great photos of the Panther G in the Wehrtechnische Studiensammlung, in Koblenz, Germany. Shown in full color are close-ups of the cupola and turret roof area. All of the pertinent late war mods for the infra-red installation are there. Also there are very nice shots of an HS5F power supply and a sight captioned as a ZG 1221. The museum display caption identifies the sight as an FG 1223 "Infra-rot Fahrgereat" (Infra-red Driving Device). Very interesting. This might be the correct nomenclature for the driver's equipment installed on the Falke and Uhu.

—Mike Roof

For those of you who might not recall, Mike was the author of an article that appeared in Volume Two, Number Two (or should we say, number six?) on German Infra-red devices.

✉

Sherman, Schmerman

As a dedicated M4 Sherman geek, I really appreciate your articles on them. I have built over 20, with no two alike. My present project is a post Korean war M4A3 (105) dozer, all converted or scratch-built from my parts box. What this is leading to is that I spend a lot of time, effort, and even money on research materials on M4's, and I never saw some of the stuff that Pete Harlem is pointing out, until I saw the picture. I am amazed and gratified that these details are there and I can use them. Tell Pete thanks for me.

I've been subscribing to MMiR since the pilot issue, and as far as I'm concerned, there is no finer magazine on the market. As a result of your reviews, I have purchased the subject model. I live way back in the mountains, and the closest hobby shop is 150 miles away (really), and I have no other geeks available for consultation, so the

reviews are doubly appreciated because of that. Thanks a lot.

—Frank Harmon

PS. Ask Pete about that "external phone box" on the left side of M4's with HVSS suspension. I believe that it is a track tool box, and the phone is on the right rear. Also, did he ever find out what that comb is on the bow? That is one of the things I never noticed until he pointed it out. Fantastic!

O.K. that is NOT a phone box, but rather a first aid kit. Pete confesses he knew good and well what it was. "I just blanked," said Pete. We've made him promise to break his Prozac in half from now on.

The comb remains a mystery...

✉

We'll all be the Judge of that

I just received the most recent issue of MMiR and am happy to say that I had a heck of a lot more fun digging through this issue than I did digging through the "Blizzard of '96" (We got 28" of snow in our area!)

I thoroughly enjoyed reading your editorial ramblings about model contest judging. In light of your observations I just wanted to mention another method of judging that our organization has been using quite successfully. I'm sure we're not the first ones to come up with this idea of democratic judging but we've probably taken it a step further than others. At our first couple of shows we held a brief judging seminar for all contestants and then gave them each their own voting ballot so they could be involved in the overall judging process. I'm sure there might be a few people who would criticize this method but after all the good feedback we've received I'm convinced it has to be one of the fairest methods around. As a matter of fact we've even decided that we'd open the judging up to everyone who attends our shows—except for the little tikes!

The reason we decided to open the judging up to the general public was because we saw this done at a small local show and the people who participated in the judging really got into the whole thing. In the end I think this method of judging helps both the modeler and non-modeler appreciate the diversity of the hobby—plus I'm sure it helps spark more interest in the hobby by getting people involved. How many times have you been to shows where you see people just sitting around waiting for the awards ceremony?

Anyway, I hope this might spark some original thought and conversation among you and your comrades!

—Tim Lingle

Hmmmm... sounds interesting. Anyone else have any thoughts on the matter?

✉

What? No dry brushing?

I think the inspiration for the Warriors Waffen SS Tanker with Map (35038) is probably the individual walking in the background of the famous (infamous?) photograph of King Tiger 222 carrying six Fallschirmjäger during the Battle of the Bulge.

Page 29 of Osprey Elites Series: Ardennes 1944

(more)

Check your labels! Expiring subs contain the magic code: (V2, 1)

CONFUSED? JUST GIVE US A JINGLE OR SEE PAGE 64

Peiper and Skorzeny has an excellent reproduction of this photograph.

I have enjoyed your magazine since it's pilot issue (more than I enjoyed trying to build that DML ZSU 23-4 on the cover). I find that spending twenty dollars a year on a good objective review source certainly pays off, considering one real dog of a kit can set you back \$50.00 these days.

I hope you continue your current format the try and stay away from extensive "How-to" articles and stick with your reviews. Although I've no clue about your demographic target audience, I doubt they need 15 pages of dry brushing tips. I'm sure they, like me, are more impressed with your fantastic in-depth research (this Sherman series has been incredibly thorough, virtually anal retentive).

Keep it up guys!!

—Bill Kalmar



Deckle Dilemma

After having read the Tiger rail car article in MMiR, Volume 2, 2, by Scot Bradley, I was a bit mystified by the decal application techniques he used to put the rail car decals on. He states on page 37 that he used white glue to set them down and couldn't get the film to go away in spite of a flat coat. He then used liquid styrene glue to solve the film problem and then another flat coat to finish it off. This technique apparently worked judging by the photographs, but I'd like to politely point out that there is an easier and less risky way to accomplish this.

Larry Provo of the Tank Workshop assisted in the design and I produced this sheet. I also produce a series of decal sheets for 1/35th scale armor under the name The Master's Hobby Supply.

The more accepted way to apply decals from this line or most other water slide decal lines out there is to; 1. Apply a gloss coat to the area(s)

where the decal image is to be applied and allow to dry; 2. Cut them out as close to the image as possible, (as Scot did); 3. Wet them and slide them into position, (our MHS carrier film is thinner to allow it to disappear with ease and snuggle down into rough surfaces); 4. Then apply some Micro Sol or other suitable decal solvent and lightly blot the decal with a damp paper towel to work out any trapped air bubbles; 5. After they are dry and you are sure that the film has disappeared, apply a coat of flat.

If you have difficulty with decal film showing or entrapped air bubbles, apply some Solvaset which is stronger than Micro Sol, but I have personally found it to be too strong for the initial application. I hope this information proves helpful for all the tread heads out there.

In closing I would like to compliment Scot on the fine job he did on this project. The overall effect of the Tiger sitting up on the rail car is well done!

—Geoffrey T. Scheuerman

Thanks Geoff. This method does work quite well. Several of us can vouch for the fact that it works especially well with your decals, which do indeed use a much thinner carrier film.

Several more of Geoff's sheets can be found in the new set of rail cars just released from TTW and also in their two Dragon Wagon kits.



Tricks with tracks

The ModelKasten and Friulmodellismo track sets are beautiful. But if they don't have that certain degree of tension applied to them and just lay on the road wheels, what good are they? My point, the modeler must always keep at the back of his mind the potential need to swivel out the rear idlers. I know one can do that on the Tamiya Tiger IIs, but I don't know about Dragon Jagdtiger idler.

The roadwheels are set as are the drive sprockets. I recently made a Tamiya Tiger II. I glued the rear idlers in as per the instructions. When I added the track, by chance one side had a nice tension to it. The other side just sagged onto the roadwheels. Blah. I had to surgically remove the idler, modify the hole into which it is placed so that it could swivel, then with the track replaced, I pulled the idler back to produce necessary tension and tacked the idler on with superglue.

—Greg Jones

Greg has put his figure right on the problem. Anyone attempting to use L to L for the first time is strongly advised to first attempt to make the idlers swing free. This will eliminate almost 100% of all fit problems. These are particularly acute on tanks with torsion bar suspensions (like the Tiger II) because often one side is slightly longer than the other. Real tankers solve this by simply adjusting idler tension.

One of the ModelKasten sets, SK-17, does contain a small assembly to create a workable idler for the Tamiya Panzer IV J. So far, no other product has been introduced to respond to this problem. If there is any enterprising company out there that wants to try to solve this one, we encourage them to take a crack at it.



Got a problem with any of this?

We'll write to us, already! Send those comments to: Mail Sack, Military Miniatures in Review, 21045 Commercial Trail, Boca Raton, Florida 33486-1006, or discuss complaints, problems, wisecracks, etc. via the Internet. Find us at the handle: MMiR35701@aol.com

Letters are sometimes edited for brevity, grammar, spelling, national security and other stuff.

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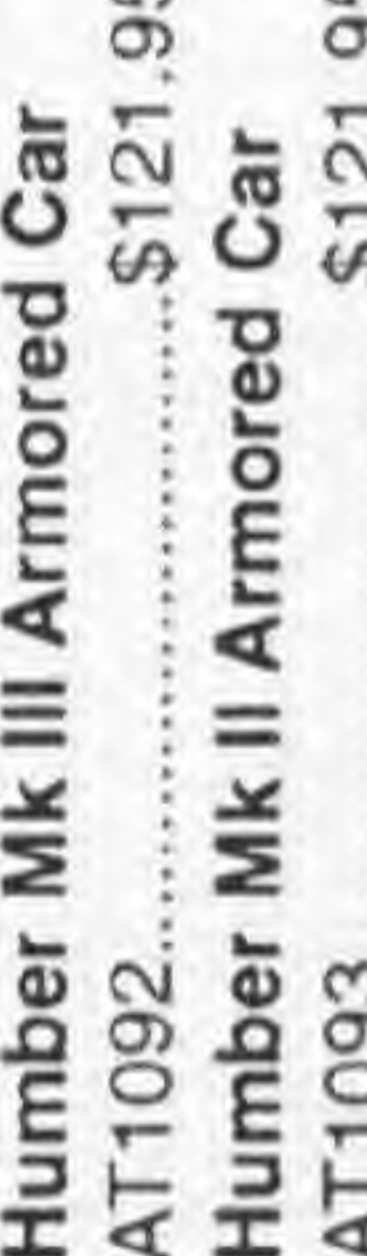
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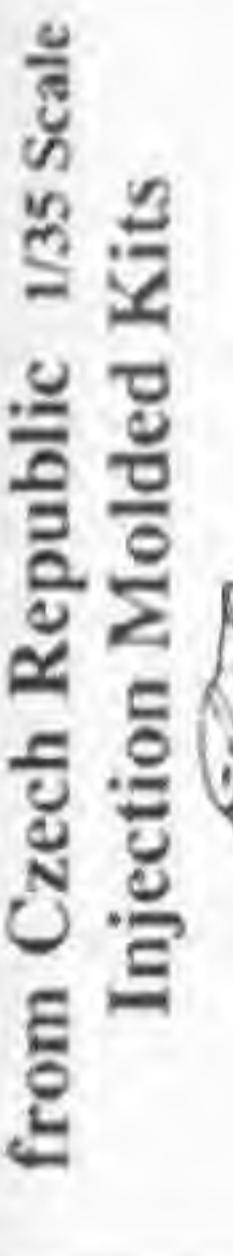
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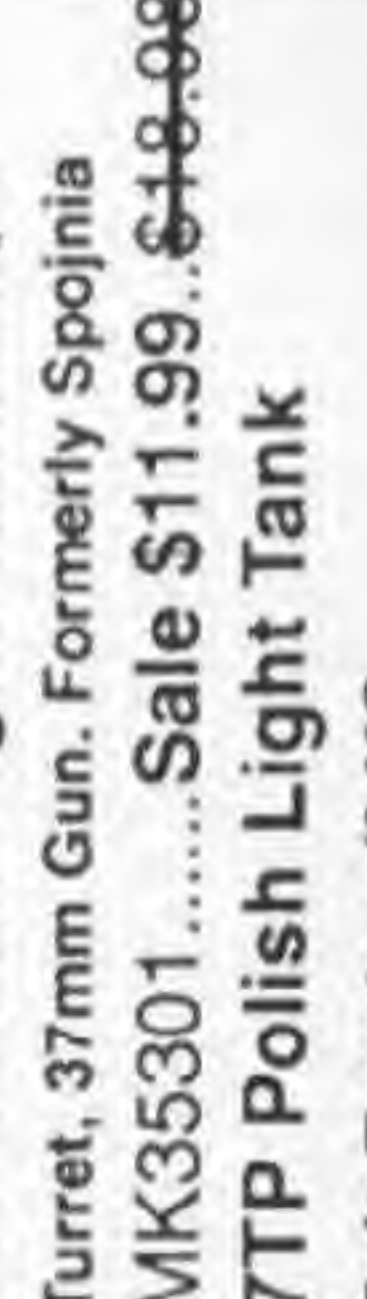


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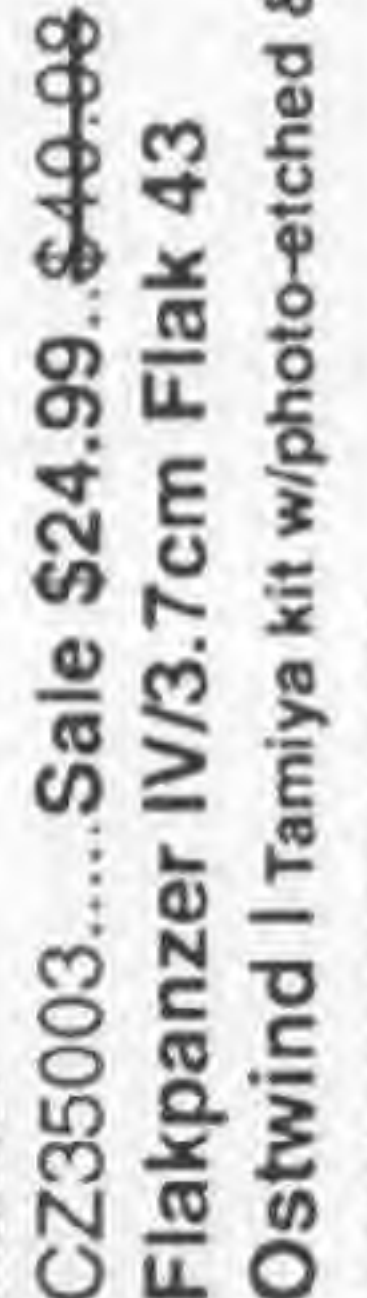


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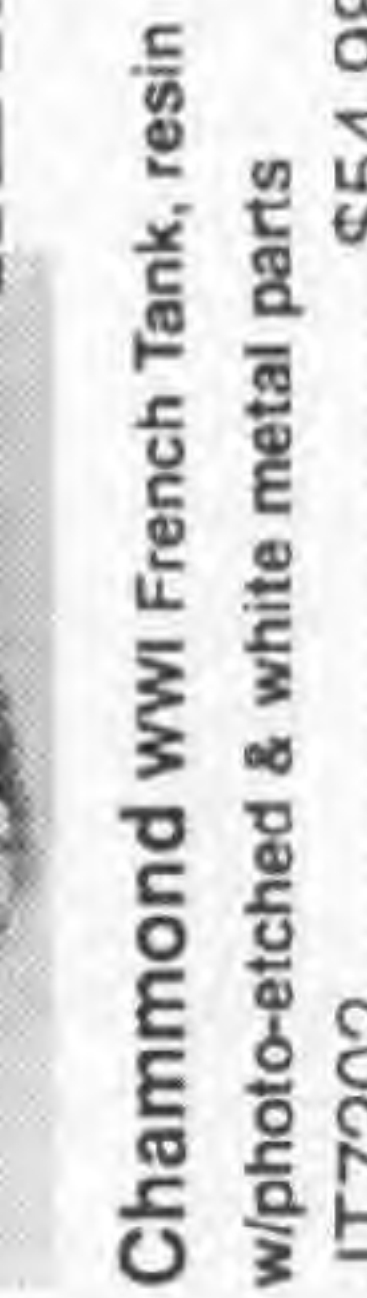
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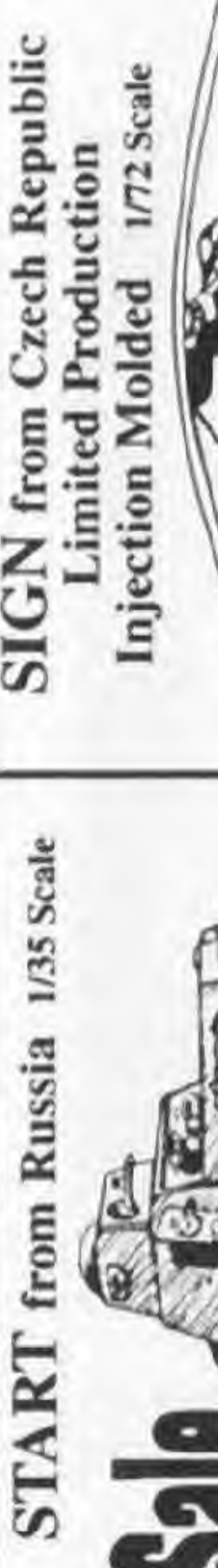
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The Year in Preview

We were fortunate enough to attend the Truck and Tracks show this year in Folkstone, England and the following contains big hunks of product information gathered there. This is a pretty impressive show. Truck and Tracks is somewhat the opposite of most American shows. Where our shows are primarily a competition, with a vendor room tacked on the side, this is essentially a huge vendor room with a small competition on the side. Truck and Tracks, along with Euro Militaire, represent two big buying opportunities for the European modeling public and they do take advantage of it. The aisles were packed with people and the business of buying (and selling) was the order of the day. Many hobby shops from different parts of the continent took advantage of the show to place their stock orders too. It's also an all armor show, which is all it takes to make us happy!

Ampersand Publishing was pleased to award its pick of the **Best American Armor** at the competition to the very talented Jorge Ferrer of Spain, for his terrific Diamond-T truck and trailer hauling an armored bulldozer. Well deserved.

So read on, but remember: the prices listed are approximate U.S. retail and are subject to confirmation with the respective domestic vendors (this is also true of the book reviews that follow).

Accurate Armour

That's Armour with a U—and don't forget it! These very likable blokes from the wilds of Port Glasgow pretty much dominated the room at Folkstone with their very professional looking display. Virtually every product they make was built-up and painted for the show. Over 50 finished armor kits is quite impressive!

And speaking of that, AA also had on display their **1/35th scale U-Boat**. You read that right: a 1/35th scale submarine. As you'd expect, it's big—really big. About six feet long. It's a waterline model and module dock sections are available to create different types of scenes. One of the sections included a Flak emplacement. No price was immediately available, but we're figuring in the seven to eight hundred dollar range. Not for the faint of heart, but admittedly quite exciting.

Also on display in the form of partially completed master patterns, were a **Panzerjäger IV "O" series** (the prototype with the rounded hull corners), a **Humber Scout Car** and the **World War Two version of the Scammel Tractor**. This last item was gorgeous with a fully articulated suspension and a highly detail cab. Tasty!

An extensive series of Centurions is planned and will begin this year with the **ARVE vehicle**. It is said that the series will eventually encompass all the significant versions of this post-war British MBT.

Prices and release dates are TBA. Check with Squadron Mail Order in the States (addresses else-



Winner of the coveted "Best American Armor" crystal cup at Trucks & Tracks 1996.



where in this mag) or directly with Accurate Armour, Ltd. (don't forget the U), Unit 15-16 Kingston Industrial Estate, Port Glasgow, PA14 5DG, Scotland, UK. Their catalog is quite nice and well worth ordering.

Aires

Just as we were going to press we received samples of the very latest in this line of armor detailing and conversion sets. They are: 3004, a gun and mount for the Tamiya 251 half-track, converting it to the **251/21 Drilling MG151S**



version; 3005, a **T-62 BDD appliqué** and detail set for the old Tamiya T-62. It contains add-on armor, fenders and other parts.

Both these sets contain finely cast resin parts, but also contain extensive sheets of photo-etched brass. Both sets looked excellent. Pricing and availability are TBA.

Armor Research

Remember these guys? Well they wanted us to let you know they are back in business. The new proprietor is Ray Mehlberger and he will continue to offer the line of resin, white metal and photo-etched armor goodies in 1/35th scale. He has a small supply of older Tamiya and Italeri kits too. Drop him a line at 845 Orchard Road, Marion, PA 52302. Tel: 319-377-0429.

Belgo Models

Following the untimely death of Belgo's owner, Mr. Richard Mottard at Euro Militaire in 1994, there was some question as to whether his popular line of





Left: The Accurate Armour crew and their latest incarnation. Watch out for these guys! Above: detail of your next model.

figures would survive him.

We have been informed that as of January 1996, Belgo is up and running again under the direction of Mr. Mottard's former associate, Edmond Macior.

Correspondence can be directed to Mr. Macior via Belgo Models, rue du Roi Albert, 93, B-4680 Oupeye, Belgium.

Chesapeake Model Designs

CMD now represents the Friulmodellismo line of metal link to link tracks. These are the ones that go together with no glue and remain workable. Assembly is accomplished with a small screwdriver and a jig. This latter item is included in each set. All the pieces we've seen have been really remarkable, both in accuracy and in casting quality. The line covers a lot of territory and features unusual subjects like the Ferdinand/Elephant and the early Tiger I. Two new items are the RSO Tractor and the Wespe.

CMD's own range of wonderfully cast resin accessories continues to grow with the addition of two new **Panther turrets**. Both are of the Beobachtung artillery observation vehicle and the first is of the prototype which mounted the 50mm gun later used in the Puma armor car. The second is the production version with the dummy gun. The casting quality is the exquisite quality we've come to expect from CMD, with small parts perfectly filled and turrets molded hollow and to scale thickness.

Look for CMD's ad on page 21 for more information.

Concord Publications

Dragon's sister company has announced more intriguing armor titles for release throughout the year.

In their popular Armor At War Series, we should be seeing the latest; *U.S. Tank Destroyers* (7005) any minute. The next up is Thomas Anderson's *Panther* (7006). Other titles listed are (in numerical order): 7007, *Armored Fighting Vehicles of the Vietnam War* (1); 7008, *Tank Battles of the Middle East Wars: (1) The Wars of 1948-1973*; 7009, *Tank Battles of the Middle East Wars: (2) The Wars of 1982 to the present*; 7010, *The Panzerkampfwagen III at War*; 7011, *Soviet Tanks of the Great Patriotic War 1941-45* and 7012, *Stalin's Heavy Tanks of the Great Patriotic War 1941-45*.

We'll keep you informed of all the precise release dates as they become available.

Cromwell

Cromwell was tucked away on a balcony at T&T, but there were an awful lot of people running up and down those stairs! The line continues to be very popular and they always seem to have new items popping up.

The brand new **LVT (A)-1** was on display along with the master pattern for their next amphibious venture; the **LVT-2** (at least that's what it looked like...). This is the open topped version christened "Water Buffalo" by the Brits. Price and availability TBA.

Cromwell is also working on the **Conquer British super heavy tank** and that nearly completed master was also on display.

Some of the Cromwell products are represented in the U.S. by Marco Polo Imports. Others abroad can contact: Cromwell Models, Progress House, 39 Kirkpatrick Street, Glasgow G40 3RZ, Scotland, UK.

DES Kit

This French manufacturer has always got a few surprises and this year is no exception. A complete **Fries 16-ton Gantry** was on display in 1/35th scale. This is a complete kit in resin and it was quite a sight to see. The model can be built either collapsed or fully deployed. Think of the dio possibilities boys! The gantry is number 35057.



Next on the list of new goodies, is a **German Heavy Generator**. Technically speaking this is the Sd. Anh. 104 unit. It's a big ass generator with a carriage similar to that of a towed 88mm flak. This is number 35058.



Also new are two trailers. The first, 35051, is the **Sd. Anh. 53 trailer** with the Kommandohilfgerät 35 sighting artillery device. Next is 35052, which represents the late and **final version of the Sd. Anh 53 trailer**. Both kits are finely molded in resin.



A smashing looking **M15A1 trailer** (35053) and **M26 Dragon Wagon** (35054) were on display. This the earlier, armored version of the tractor and the later wider version of the trailer. The M15A1 trailer saw service right through Vietnam, although it wasn't pulled by an M26 there, but rather the M123 truck.

Both the tractor and the trailer are cast in resin and will be available in Europe sometime this summer.

Future items include the artillery towin' version of the **18 ton FAMO half track** (they already have the crane and prime mover versions). This will be number 35022. Subsequent versions of the Dragon Wagon will also follow with the **M26A1 soft skin tractor** and the narrower **M15 trailer**. Prices and dates are TBA.

DES kits can be tricky to find. They are represented in the states by Squadron Mail Order (bethca didn't know that) and can also be found through Red Lancers. This is a small, specialized company and availability is sometimes spotty (although this is slowly starting to change). Point being, if you see an item you like, don't hem and haw—buy it! Blink and it could be gone.

A catalog can be obtained directly from DES Kit, 27, rue des Hauts de Bonne Eau, 94500 Champigny sur Marne, France. Be nice and throw in a couple of IRCs for the return.

Dragon

And they said it was going to be a slow year... Well color us giddy, here's the low down:

In the WWII series (6000), there is: 6048, **M4A1 75mm early version**; 6053, **German Signal Troops**; 6054 **U.S. Tank Crew (NW Europe 1944)**; 6055, **British Commonwealth Troops (NW Europe 1944)**; 6056, **German 2.8 cm sPzB41 w / Crew (Eastern Front 1943)**; 6057, **German Grenadiers (East Prussia 1945)**; 6058, **German Anti-Tank Infantry (Eastern Front 1944)**; 6059, **Waffen SS Grenadiers (Kharkov 1943)** and 6060, **Hetzer Command Version**.



In the Imperial series, some very interesting activity. Listed for release in the coming months are: 9017, **Flammpanzer III (F-1)**; 9018, **PzBflswg III, Ausf K**; 9019 **PzKpfw. IV Ausf. F2**; 9020, **PzKpfw. IV Ausf. G**; 9021, **Jagdpanzer IV L/48, early production**; 9023, **Russian ZIS-5 truck**; 9024, **British Valentine Tank Mk. III**; 9025, **British Bishop SPG**; 9026, **PzKpfw. II Ausf. C**; 9027,



PzKpfw. II (Sf) WESPE and 9034, **Kübelwagen Type 82 with crew**.

A few thoughts on the above. The two Panzer III kits are no doubt further variations on the theme of the old Gunze kits. It's a theory around here that the Panzer IV offerings may just be "plastisized" versions of the last complete Gunze kit. This was that super expensive PzKpfw. IV Ausf. G white metal and photo-etched extravaganza. It retailed for \$400.00 in the states (say what?). A proper styrene version of this kit would be most welcome as the plastic parts in the kit were pretty nice. It's a theory anyway.

The ZIS truck, the Valentine and the Bishop are re-boxed offerings from a Russian firm. The Panzer II and the Wespe are also Russian offerings. Depending on where you are in the world, you may find these kits

boxed under a couple of different names. VK, Alan and TOM are some of the other companies that have similar arrangements to sell them. This is a good thing.

The Kübel might be the Hasegawa kit. Dragon has a pretty good relationship with them, so this make a lot of sense.

The most intriguing part of the Imperial series list is six kits which are listed as "limited edition." The list is as follows: 9028, **StuG III Ausf F**; 9029, **PzKpfw. III Ausf. H**; 9030, **Pzbeobug III Ausf. H**; 9031, **StuG III Ausf. A "Grossdeutschland"**; 9032, **PzKpfw. III Ausf. G "Afrika Korps"** and 9033, **Tauch Panzer III**.

Now the curious thing about these is that the Imperial Series is made up of other manufacturer's kits complete, or supplemented with parts made by Dragon. Most of the above listed kits are already Dragon kits, so what qualifies them as Imperial Series will have to remain a mystery until their release. Most of the stuff sounds pretty exciting!

A few other bits and pieces are 6808, **G.I.s (Pusan Perimeter 1950)**. Four studs in M43/M45 duds. 3515 is a **MULE with 106 mm recoilless rifle and crew (Hue City 1968)**. This is the infamous Marine Corps mini tractor sometimes pressed into use as a platform for the 106.

In the Quartermaster series there is 3819, a **German Tank Antennae Set**. Looks like five or six different types of mountable antennae, including the crow's foot type. We can't wait to see this one. 3920 is **M4 Track - Rubber Type**. This is your basic rubber chevron. 3821 is listed as **40cm Track for Pz III/IV, Super Detail Version**. Interesting. We wonder what that means? Dragon already has a version of this track

in the series. Does "Super Detail" mean workable? We wait with baited breath (yuck).

Looks like we can expect a biggie **Michael Wittman in 16th scale**. The same pose as the "Panzer Aces," with the leather jacket and headphones. Number 1609. Also a schutze from the HG Division raising his signal pistol. Number 1608.

Not exactly our cup o' tea, but interesting nonetheless, is a new series called "Sword and Musket." These will be denoted by the stock number 7500. These will be the 1/32 scale figures from through the ages, from early history right through the beginning of World War I (they say). The first in the series is 7501, Union Infantry, U.S. Civil War 1861-1865. A very cool idea, indeed.

Hornet

Hornet in the personage of Roger Saunders is completely out of control, with absolutely superb figures popping up at virtually every turn. Can this man be stopped? We hope not.

New figgys are: the last two **Russian tank riders**, completing a very spiffy set of four (all available separately). The first of the new lot, RH12, is seated, while the second, RH13 is posed leaping off the tank. All these guys are designed to fit a particular spot on the Tamiya T-34 series. In



conjunction with some of the other WWII Russians from Hornet, you could work yourself up one heck of a diorama.

A very attractive little **Fallschirmjäger (GH24)** standing with his MP40, completes this round.

More figures and head sets are due in the weeks and months to come. Look for these products running rampant in a hobby shop near you.

Kendall Model Company

More from Willy Peeters and company. 35-1003 is a beautiful little **Willy's (no relation) Jeep Update Set** for the Italeri kit. It includes a fully detailed resin engine and other bits along with a full developed sheet of photo-etched brass. Price \$20.99.

Field HQ Communications Set



35-8002 is a nifty **Water Well**. This is an all resin kit and it looks perfectly suitable for almost any period of history. Water not included for \$14.99.



35-8003 is a very useful **Concrete Fence kit**. This can be used to construct European concrete fences of the type used during the middle part of this century. It might even be suitable for a modern NATO dio. Several sections and a gate for \$11.99.

Future items are 35-2003, **Field HQ Communications Set**. This is another real beaut, with a super detailed field telephone exchange, typewriter and other gear. 35-2001 and 35-2002 will both be photo-etched sets. The first will be the very small tie downs located all over U.S. tanks and the second will be a sheet of casting numbers, such as the type seen on the cast hulls of Shermans.

Kendall products are now available through most major distributors and a lot of local shops.

Jordi Rubio

This well known line of turned aluminum gun barrels continues to grow. Three new items were on display (along with over forty other products!). TG-31 is a **17-pounder barrel**, suitable for a whole family of British vehicles.

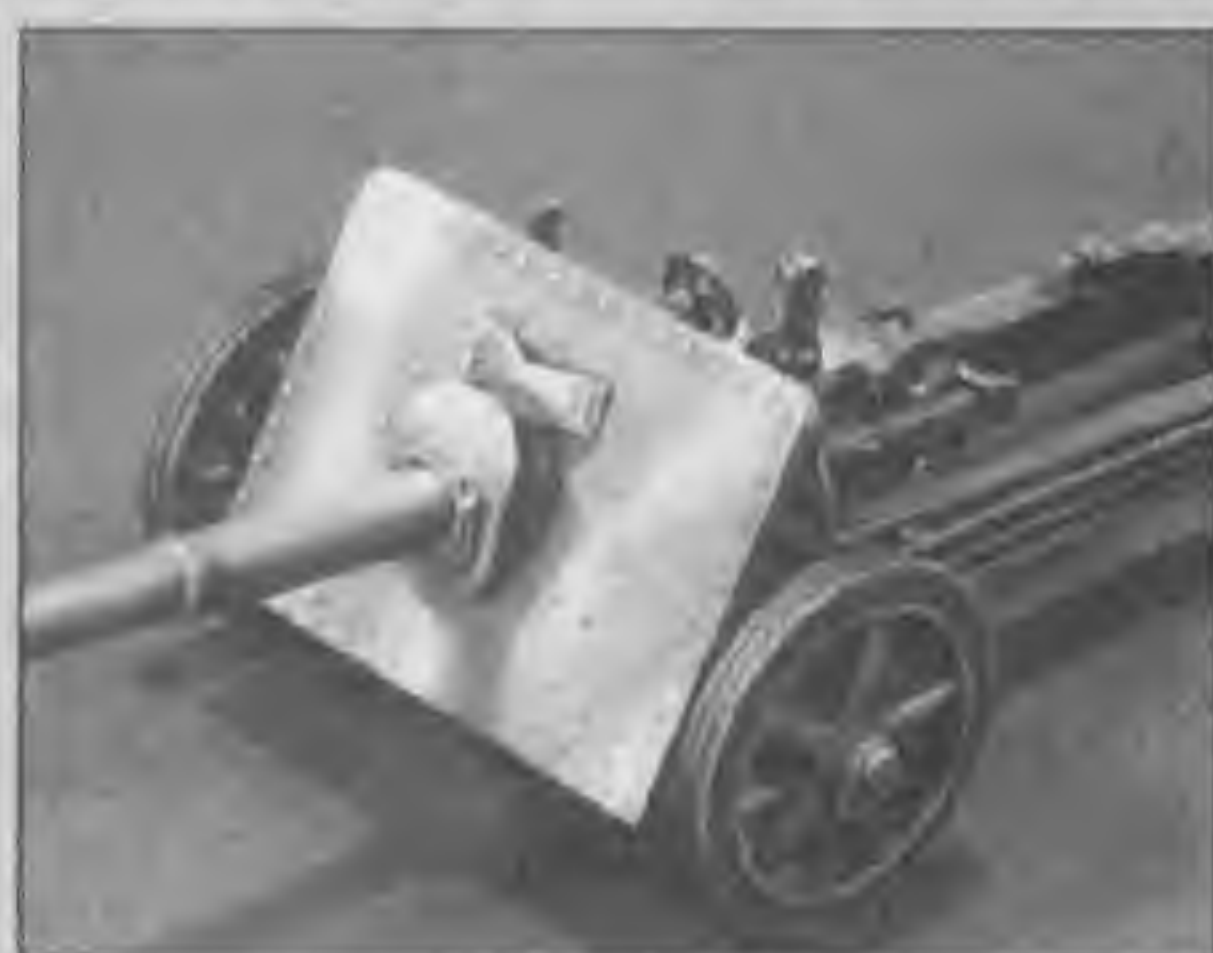
TG-35 is a two piece set for Tamiya's 88mm Flak. One barrel is a replacement for the kit's barrel (the Flak 36/37) and the other is the **Flak 18 barrel**. This is the more numerous of the two weapons and the barrel change is the major difference between the two. A quick and easy conversion.

ModelKasten

MK was nice enough to forward a sample of their most recent release in white metal, the German taperbore 7.5 cm Pak 41. This was very novel weapon in the German WWII arsenal. Taperbore means that the barrel of the gun narrows towards its end to squeeze the round and increase its muzzle velocity. It worked good, but only over short ranges. This particular gun only had about half its barrel conventionally bored and the other half tapered, which made it unique among these types of guns. Its role was strictly anti-tank and combined with a tough tungsten round, it was a potent weapon against enemy armor.

Germany's severe tungsten shortage put an early end to its usefulness and it was noticed that the taperbore only gave its kick in short range duels. Longer ranges saw the round poop out and penetration suffered as a result (the rounds started out as 7.5, but by the time they left the other end they were 5.5 cm—this is called emergent caliber). The weapon entered service in 1942 and only 150 were produced and as the ammo depleted and the barrels wore out, they were chucked. It's been said that some of the barrels were replaced with those from a Pak 40, but evidence is scanty.

The MK kit is an all white metal affair with a couple of hunks of brass rod enclosed. Construction is very simple, in spite of the fact that there are several dozen parts. The parts are all ID'd with a photo and this eased the whole process. We had the whole thing



together in two nights, with absolutely no problems at all. The toughest part was buffing all the pieces with a fine brass brush and dealing with a teeny bit of mold seam here and there.

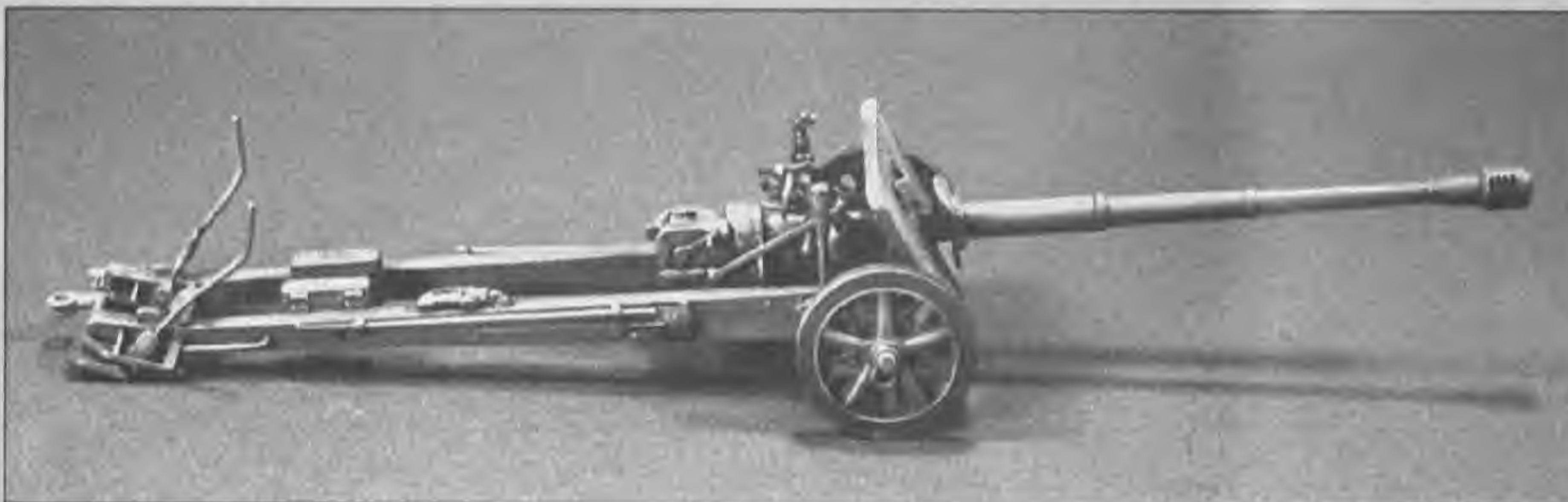
If you're careful with the brass rod, you'll end up with a kit that remains fully articulate even after painting. The rod is installed at the trail arms, spades and ball mount.

We painted ours an overall field gray with dark yellow stripes across the shield.

It's a great looking piece when complete. The gun's unusual ball mount and integral shield create a very unique low slung look. The overall level of detail is as good as good gets. Super detail straight from the box. It's ultra pricey

(\$107.95), but we're not likely to ever see anything this obscure in plastic.

In other news, ModelKasten recently announced a workable version of the Wespe track to be released this May. It'll go, of course, with the Tamiya Wespe. Price and stock number TBA.



The Tank Workshop

TTW surprised the bejezus of us by releasing **four brand new rail cars**. These are the other types of rolling stock seen used with German supply trains. They were commonly interspersed with the heavy rail cars for hauling a whole variety of equipment. The first two (2012 & 2013, \$80.00 each) are different types of flat cars, one for light vehicles such as half tracks or trucks and the other for heavier loads like a Panzer IV. The third car (2015, \$80.00) is basically a flat car with short sides. This was used for hauling a variety of gear, including troops. You may have seen pictures of this car with a 38t on it used for anti-partisan duties. This type of 'half box car' is a rarity on American rails, but it's still seen on most European railways used as a repair and utility wagon. The fourth release (2014, \$85.00) is a full sided and covered box car, used for hauling any manner of non-weather proof goods.

Now all we need is an engine...

We ask and they supply! Due out this June will be the **Deutsche Kriegsbahn, Series 52, 2-10-0 engine and tender** (stop, stop, we're starting to black out...). The model will be a whopping twenty-seven inches long and it will represent the most widely used engine in the Reichbahn livery. The 2-10-0 designation denotes two unpowered wheels up front, followed by ten drive wheels (5 to a side), and no trailing wheels.

Hold on while we sit down and take a breath... OK, we're better now. The price and precise release date are TBA, but you can pre-order the kit right now.

There are several other smaller new releases, but because most of it's too small to warrant a full-blown review (but most of it's so nice, we wanted you to know about it), we offer up the following mini-reviews. Everything's been built and primed in light gray.

The guys at TTW have added **ammo boxes** (#TTWD1077) to their line of resin parts. The larger ones shown here are 105mm howitzer size and the small ones



are the type hand grenades come in. Both sets include 4 closed boxes, 4 open boxes, and 4 lids for the latter. Unlike some companies boxes, these are bubble free

and have nice wood grain detail on all surfaces. We especially like the munitions boxes because they go nicely into the MRC Huey or DML OH-6A, once you fill them with frags, Willie-Petes, and smoke grenades. Way cool.

A small number of Shermans in the US. Army in Europe were up armored in the field by application of concrete troweled right onto the glacis plate. Tank Workshop now offers an example of this in a one-piece resin casting that captures the look and feel of cement (#TTWA0016). It has dimples in the back side so it fits without modification on the Tamiya M4A3 hull plate and we're sure you could get it onto an Italeri/DML hull without problem. It looks great. We have installed it here on a Tamiya hull.



Next is #TTWA0017 M4 2Pcs. **Wood Appliqué**. This



novel kit simulates one pattern of the boards used on some late WWII USMC tanks in the Pacific. It comprises two resin parts, one each for the sides of any M4A2 or M4A3 hull with 47 degree single front glacis plate. Several boards are simulated with excellent wood grain texture and the numerous bolt heads used to keep them on the side of the Sherman. Cleanup was easy and the parts are bubble free.

TTW has added three types of **Cullin Hedgerow** prongs for installation on M3 or M4 tanks. We have applied them to three different transmission noses, a task made easy since TTW provides adapter parts to make them go on almost any kit.

The Cullin device with angle iron is the most complex type offered, comprising of 6 parts (**Hedgerow Cutter Type A, Angle Iron Teeth** #TTWA0029). The rhino teeth are one part, with three under side support prongs to add and two clevis mounts to install between



the rhino and the tow ring mounts on the nose. Here, we installed it on Tank Workshop's early **cast nose transmission housing** (kit #TTWA0020).

Next is the T-beam toothed hedgerow cutter cast in one part that forms the

5 prongs and cross beam (**Hedgerow Cutter Type B, T-beam Teeth** #TTWA0030). It comes with the same bits as above to connect the rhino teeth to the towing ring mounts. Here it's assembled to a Tamiya M4A3 transmission nose.

The third type (**Hedgerow Cutter Type C, I-beam Teeth** #TTWA0031) has I-beam teeth and is made from a single resin part to which you add the same clevis parts used in all three kits. When you sand out the nub left where the mold overpour was cut off, be careful not to sand the cross beam too much or the backing will fall out. Once smoothed out, we installed it on another TTW part, that nice three piece tranny nose assembly (**3 pcs. Bolted Nose** #TTWA0019). Note that the tranny nose includes the sides and final drive details which makes it different when compared with other company's noses. To use it you have to cut off more of the lower hull than other noses require.



All of the above are good quality and will help you customize your tank the way you like it. We encountered no bubbles or other clean up problems with any of the parts reviewed. The Tank Workshop also sent us samples of 3 turret conversions, and an early M34 gun mantlet made for the Tamiya M4. Kit number TTWA0011, labeled **M4 Early Turret with Loader's Hatch**, represents the original low bustle turret with a late-war upgrade of the oval loader's hatch. Not all that common, but an interesting choice. Both the loader's hatch and pistol port cover are separate pieces so you can position them as you like. It follows the Tamiya turret pattern by having the rooftop sight mounting holes open so you can slide in a complete

sight. An extra pair of open and closed sights are included, but these do not extend into the turret. Not a problem unless you plan to include the interior.

Kit number TTWA0012, is called **M4 Early Turret** and it makes up into the early production low bustle 75mm turret also, but this one does not have any late features. Like the previous kit, it has a separate pistol port cover and casting marks in a different location. It is well suited for backdating the Tamiya kit. Cleanup is confined to opening the mantlet hole and other ports which come covered with a very thin film of resin.

Kit number TTWA0040, is a **M4 Late 75mm Turret with Loader's Hatch** and it is a high bustle turret with the same hatch and sight options provided in the previously mentioned kits. It is similar to the old turret on the Tamiya M4A3 kit in type and shape, but we think it should have the extra thick armor casting on the right cheek where earlier turrets had appliqué added. Putty applied properly would fix the problem easily. What you see here is the way it comes from TTW.

All the aforementioned turrets are beautifully thin castings and assemble in the same manner as the stock turret in the Tamiya kit. The overall quality is some of the best we've ever seen is resin. All are made to fit the turret race of the Tamiya kit and do so without any fit problems. They are well suited for putting an interior in them and the operable pistol port will help you see inside (and save you some major hackin').

We put the TTW kit for the early **M34 75mm gun mantlet** (kit #TTWA0044) on the early turret described above and it is quite nice. All the parts are resin except the gun tube which is turned aluminum. TTW thoughtfully supplies both versions of the mantlet, the original form and the one with metal flanges to protect the gun outlet. That makes this a flexible conversion as does the inclusion of the early type mantlet cover for the coaxial 30 cal machine gun. A resin copy of the Italeri M4 kit's bow 30 cal is included so you don't have to scrounge one. This kit is the way to go to put the early gun mount on your Tamiya kit.

The sum of the parts shown here allow us to highly recommend all these optional turret parts for the Tamiya M4 and we won't be surprised to see them installed on DML kits too.

For complete ordering and additional pricing information on any of the items mentioned above, see the Hobby Depot ad on page 21.



TTWA0011



TTWA0040



TTWA0040 & TTWA0011

The last item, AC-01, is a four-piece set of **distance markers** for the fenders of German armored cars. These can be used on over ten different vehicles. We like the fact that they're solid brass, as this makes them less likely to get broken off.

Check with your favorite local source, these products are now becoming more available in North America.

Catalog inquiries can be addressed to Jordi Rubio, Av. Gaudi, 56, 08025 Barcelona, Spain.

MB Models

MB has a couple of new bits this time around. The first is an **ammo set for the Tamiya Sturmiger**, MB 1131, \$24.95. You get six regular rounds, four crated rounds and a rifled barrel. The rounds are molded in two halves, so there are no pesky side plugs and the rocket tails fit right into the grooves too.



A **Panzer III E conversion** is ready to go as well. This is MB 1191 for the DML

Panzer III J kit. Retail \$24.95. This is a new resin upper hull, turret, gun, cupola and a white metal drive sprocket and idler wheel, front towing eyes and shock absorbers. A sheet of photo-etched brass is thrown in for good measure. Not a bad deal at all. This item is said to be limited production.

Check your local hobby shop or MB Models, 7325A Cross County Road, Charleston, SC 29418.

MRC

MRC keeps crankin' out those 1/35th scale whirly birds. If you haven't tried one of this kits yet, you're in for a treat. They contain some of the nicest tooling anywhere in the styrene universe.

There's a couple of new birdies on the way, the first is the **OH-58D Warrior "Thugs."** Another variant of the Kiowa, this model also features detailed cockpit

and engine compartment. Number BA108, retail \$26.98.

Next up is another version of the venerable Bell 47D "Bubble Bell." This time it's the **Coast Guard model, the HTL-4.** This is the heli equipped with the large dual float units. This is product number BA109 and it carries a \$23.98 retail.

Both these kits are available at well-stocked hobby shops and retail mail order outlets.

Nimix

This Spanish producer of resin kits and figures is not all that well-known in the states. They are most famous for their line of modern kits. They produce a complete Patriot anti-missile battery in 1/35th scale, which includes the launcher, the command shelter and the radar unit, all as separate kits. They completed the set-up this year at Trucks and Tracks with the announcement of the **Oshkosh tractor.** A built-up model was on display and it looked mucho good. It was mostly a resin kit, with photo-etched sections for the cab. Dare we say hubba-hubba?

Nimix represents the **Miniaturas La Compañia** line of 1/35th scale figures. The latest is a Feldwebel of the Panzer Lehr Regiment in December 1944. He's shown seated, holding a cute little poochie. The figure is molded in resin. There are about eleven other figures in the line, of all of WWII vintage. No word on the retail.



Nimix and Miniaturas La Compañia are still rare stateside, but Red Lancers (what would we do without these guys?) has been known to stock both lines. Give them a holler.

Floquil-Polly S

Floquil wants you know that their new line of Polly Scale paints have been certified non-toxic in accordance with ASTM regulations. The ASTM is a industry body that certifies the relative toxicity of certain

paints and chemicals. This is a big deal, as not many paints have this certification.

This makes one of our favorite paints even better. Although we won't be serving it up at our next cocktail party, it makes us a lot more comfortable using it.

If you want more information about any Floquil-Polly S product, you can contact Floquil-Polly S Color Corporation, 4715 STHWY 30, Amsterdam, NY 12010-9204. Tel: 518-842-3610; Fax: 518-842-3551.

Precision Models

This small Belgian manufacturer has quite steadily released a whole series of superb German WWII artillery kits. Their 15 cm and Pak 43 kits were renowned for their great quality.

New items announced at Trucks and Tracks were updates sets for both the **Nashorn** and **Hummel** by Dragon. Helps comes mostly in the form of new resin



parts for the guns with a few other pieces. These are items 35.009.Z and 35.010.Z

A new addition to their line of accessories is a **Fuel drum and Water Pump set.** This contains several 88 gal. drums and a pump unit.

Their latest artillery piece just about left us speechless (no small task). It is a magnificent model of the **German 17 cm K18 field piece.** What a hunk of model! It's mostly resin with a large sheet of photo-etch to represent the side platforms. The castings are very well-done and even the resin barrel was razor straight.

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We managed to snatch one for the next issue and we can hardly wait to tie in to it. Stay tuned.

The Precision stuff is all represented by Squadron mail order, so keep an eye on their flyer for current pricing and availability.

R&J Enterprises

Rich Sullivan of R&J has been keeping us apprised of many of their very unique and interesting armor items.

They are now stocking a good selection of the Criel line of resin kits and figures. Criel is an Italian company, and as you'd guess, they go long on all the Italian WWII subjects. Pretty nifty stuff too. An excellent selection of figures (about 20 so far), including a 25-piece spare head set and three incarnations of "Il duce." There is also a new 120mm figure in the line depicting a **Battalion M "Black Shirt" trooper from 1944.**

Their line of full kits and conversions is also stocked by R&J. This includes several Italian and German armored vehicles and some neat little Italian artillery pieces.

Rich reports that he's got a pretty decent selection of all these items, so if you've been curious, now is the time to act. We can tell you that the Criel line is much improved over the metal kits they did a few years back. Everything is now cleanly cast in tan resin, with very clear and concise multi-lingual instructions.

R & J has offered a product for a while now called "Zimm-It-Rite," which is, of course, for adding zimmerit coatings to all your German AFV's. The product is basically a two-part putty which stays pliable for a couple of hours and is water soluble. This product is now packaged with two sets of application tools. These are small white metal stamps that have a variety of different zimmerit patterns on them. A small handle is provided and all you do is moisten the tool and press it onto the flattened putty. Goodie! you say? Yep, we agree. Our favorite tool is the waffle pattern one for Sturmgeschütze. It couldn't be a better value too, the whole set is priced at \$22.00. You probably won't need to buy another set as there's enough putty for dozens of vehicles.

For information on R&J products and ordering dope, check out their ad on page 20.

Resicast

Resicast had one new item on display at T&T, the Bedford flat bed truck, however, most of the products produced by this Belgium company are little known to North American modelers. We'll tell you what: get to know these guys. Their line is truly superb. It is primarily composed of Brit stuff from WWII, but much of it is highly unique. For example, they do a Churchill Mk I (along with a Mk IV NA 75mm and four other versions!), three different conversions for the Bren carrier, several variants of the Sherman in British service along with some very interesting "oddballs" such as the modern German Itlis jeep, a Ford Ambulance 1918 and a magnificent two-foot long assault bridge. The latter is for use with their

Church ARVE kit. Another version of this is available with a section of rounded beach revetment to place the bridge against.

Oh—yeah.

Look for this stuff. They have made many, many improvements over their earlier efforts and the quality of their kits is tops. They are around, check with either Red Lancers, R&J or APC Hobbies. Or if you're the international type, contact them direct at: Resicast, 517 Vieux Chemin de Binche, 7000 Mons, Belgium. Tel./Fax: 32 65 35 18 65. Dial 011 first, from the states.

Ryton Publications

Get ready for another wildride from Ryton. May of 1996 will see the release of **Panzer Truppe**, a 278 page extravaganza on the uniforms and insignia of the Wehrmacht and SS Panzer units.

We had a quick peek and when we came to, we pronounced it wunderbar. Order this one early, we know they'll go fast. As with previous titles from Ryton, if you wait, you will be disappointed. The print runs are relatively short, so when they're gone... well you know.

Check with your favorite bookseller on precise availability.

Squadron Mail Order

SMO has the full line of Tom Modellbau kits in stock, including the following: TB5005, **Raketenwerfer 43 88mm Puppchen**, \$10.98; TB5007, **L/45 Bofors 37mm Anti-tank gun**, \$21.98; TB5008, **TKS Polish Tankette 20mm gun**, \$14.98; TB5009, **TK-3 Polish Tankette**, \$14.98 and TB0018, **T-18 Russian Tank**, TB0018, \$24.98.

Some very interesting items from the Russian company Zvezda too. ZV5003 is the **ZIS-5 3-ton Russian truck** (WWII), retail \$24.98. ZV5001 is the **SU-76M SPG** with a retail of \$24.98.

Many of these items can be scarce, so it's good to know they're all in one place. That ZIS truck is still pretty new and it's very good for a Russian produced kit.

For you small scale guys, SMO has the full line of 1/72 Czech kits from the Czech Republic. These are all resin kits and the series is said to be limited. Because of this they will only be available through SMO (and probably not for long). The latest kit is a minute **Fiat-Ansaldo CV-35 tankette**. Here's the rest of the list: CK 2005, **BT-5**, \$15.98; CK 2006, **BT-7**, \$15.98; CK 2007, **BT-7A**, \$15.98; CK 2009, **Pz 38**, \$15.98; CK 2014, **IS-2**, \$18.98; CK 2017, **SU-76**, \$15.98; CK 2018, **BA-6**, \$15.98; CK 2019, **BA-10**, \$15.98; CK 2020, **BA-64**, \$15.98; CK 2021, **BMD-1**, \$18.98; CK 2023, **ASU-85**, \$21.98 and CK 2025, **Ford GPA**, \$15.98.

The new **Squadron Mail Order catalog** is now available. It's 72 fun-packed pages and 8 of those are color. This is a handy tool to have around and in addition to their monthly supplements, you'll really know what's going on. It's got a plane on the cover, but don't

hold it against them. The price is \$4.50.

Squadron Mail Order is very internet savvy. They've got a new home page on the World Wide Web (or WWW if you're geeky). The address of said page is: <http://www.squadron.com/mailorder/>

It has all kinds of product information and contains a few nice color photos too (2400 bps users beware). You can't place an order through the page yet, due to security constraints (errant card numbers flying everywhere). This will change as the page develops we hear.

For regular old e-mail contact SMO at mailorder@squadron.com

And of course, for the horse and buggy crowd, you can always reach them at Squadron Mail Order, 1115 Crowley Drive, Carrollton, TX 75011-5010. Tel: (214) 242-8663, Fax: (214) 242-3775.

Scale Model Accessories

SMA's big news at Folkstone was the introduction of their big **Diamond-T truck/Rogers Tank Transporter combo**. The kit is resin and white metal with photo-etched parts. It really looked great!

No word on price or availability stateside. Squadron represents them, but check with your English sources if you can't wait. Be prepared to dig deep in the wallet, as big in resin means big in price.

For information on SMA products contact Scale Model Accessories Limited, 160 Green Street, Enfield, Middlesex EN3 7LB, England.

Tamiya America

In addition to the Wespe, Tamiya throws in a few other tasty bits for this quarter. A **special limited edition of their middy Tiger** will be available. Dubbed the "**Otto Carius**" version it will contain three figures representing Carius and some of his crew, additional bio info on Carius, new decals and box art. If you haven't picked the middy up yet, this might be the one to get. It might not be a bad idea to buy one and just keep it in the wrapper... Kit number 35202 will retail for \$63.00 when its released in April.

35201 is

German Tank Crew at Rest.

This will be six figures hanging out, acting like the bad dudes they were. Two little birdies are also included. These are not the same guys that come with the Carius Tiger. \$11.00, April availability.

Wolf

Wolf, the other half of the "dangerous duo" of Wolf and Hornet has two new Teutonic Titans for the 1/35th scale crowd. The first is WAW 19, **German Tankman WWII**. Kind of a unique pose, with his jacket open and the big ol'

snow pants on. The

second new item is a very unique **Hitler Youth Drummer Boy** (WAW 20). A little half-pint guy with a drum almost as big as he is. A very interesting piece.

Both figures are beautifully cast in resin.



Battalion M "Black Shirt" trooper from 1944.

Their line of full kits and conversions is also stocked by R&J.



Roadtest

This issue marks the end of our year-long road test of the **Testor Model Master Airbrush**. The verdict: We liked it—a whole bunch.

Let's review. Its big advantage over traditional brushes is different tips for the various spray pattern widths, replacing the long needle assemblies. Each



tip has a retractable needle. This aids in cleaning and also allows the user to be less concerned about a fragile needle tip. Each interchangeable tip has four small lugs that protect its needle when the tip is installed. When it's removed, the needle automatically retracts into the tip.

There are four tips, ranging from very fine to wide spray patterns. The smallest tip atomized paint very finely.

The really great part about these tips is that they can now be found in many craft shops as Testors expands into that market. Replacement tips are about ten bucks. It's great not to have to fret about a tip that's wearing out at 2 o'clock on a Sunday afternoon. The finest tip seemed to last about 9 months or so, but then again we're slobs, so more careful cleaning may extend its life.

The earlier sets had paint cups with rounded bottoms, making it tough to set the cups down. These cups also had their siphon tubes at the bottom, which meant if they were taken off, they drained. Current sets all have the slick black cups of traditional top-siphon design.

We passed the tool around here and most of the comments were positive. On the negative side, some found that the safety lugs built up acrylic paint residue quickly and others felt the plastic body was tough to get used to. Generally though, most praised its light weight and ease of cleaning. In conversations with Testors, they have mentioned a new tip without the lugs specifically for acrylic paint.

Testors has accessorized the line well, with color cup sets, a very useful coiled hose, pipettes, mixing jars and a super little device that you spray thinner into for cleaning. The unit catches the thinner and filters it while draining it into a large jar for disposal. This works great for both acrylics and enamels. Replacement filters are sold with the accessories mentioned above.

The whole brush system is also sold as the Aztec 3000. The entire range of Aztec accessory products work perfectly with the Model Master brush. This includes, tips, cups, etc. These accessories can be found at any well stocked art store that carries the Aztec line of products.

All in all our opinion of this tool is high. It's the first airbrush that has been aimed squarely at the modeler.

Now if we only could decide who gets to keep it...

Book Reviews

Germany's Panther Tank: The Quest For Armored Supremacy

By Tom Jentz.

Hard cover with dust jacket, B&W, 160 pages.
\$45.00



THIS TITLE BELONGS ON THE BOOKSHELF of every one interested in the Panther tank.

This isn't an automotive history of the Panther, the Spielberger book pretty much covers that. Nor is it a Panther photo album, the Ryton book covers that.

Instead, this is a book that covers the history of the

Panther itself. Photos are plentiful, but were chosen to illustrate a point, so there aren't too many in action

photos in this book. The book's ten chapters cover the Panther D through F, with a diversion into the Panther II. The other chapters cover the schmorturm and "Other Fantasies" (good chapter name, eh?), Production, Operational Characteristics and Operational History. For those of you who have the Kline and Khune *Tiger: A History of a Legendary Weapon*, the Panther book is similar. There are charts for the Panther Ausf. D, A and G showing when features were introduced or deleted, and a reference to the section that discusses the feature. Jentz also produces tables containing hull numbers, which manufacturer was assigned those hull numbers, and the month those hull numbers were produced.

All in all, it contains over 170 black and white photos, along with dozens of line drawings. A book who's time has come. Available from most booksellers.

D-Day Then and Now After The Battle

Volume 1: Hard Cover; 320 pages.

Volume 2: Hard Cover; 416 pages.

Both volumes B&W with color dust jackets.

Volume One: \$59.95

Volume Two: \$79.95

Boxed set available: \$139.90



HOW DO YOU REVIEW A WORK AS massive as this? These are really not your run of the mill hobby books. It is, perhaps, more appropriate to call them historical texts.

Let's start with some background on After The Battle. ATB is a publishing house, who's original role was to publish After The Battle magazine. This magazine, which is publishing quarterly, explores the battlefields of the world wars. The idea is to travel to the sights and compare their current condition with photos taken at the time of the actual events. This sounds simple, but the amount of research involved is quite substantial. These comparisons also

include very comprehensive written accounts of the battle, with descriptions of all the combatants, orders of battle, weapons information and more.

They've been at it for over twenty years and the original format has inspired over twenty books—all using the 'then and now' format. Some of these are nearly legendary among devotees of the period. The previous *Blitzkrieg in the West* and *Battle of the Bulge* (both by Jean Paul Pallud) are must-haves when it comes to studying any aspect of the two battles. One example of the kind of detail can be found in the *Battle of the Bulge* title. Inside is the complete accounting of each of Kampfgruppe Peiper's King Tigers. Where each started the battle and where each one was when it was abandoned or destroyed. It's not uncommon for the authors to pin-point the exact spot where a particular vehicle was destroyed.

They also love to (finally) give all the correct captions and LD's to many famous photos. This even extends to tracking down the names of the individuals in the photo!

D-Day is by far, the most massive work yet. The sheer volume of research boggles the mind. This is an extremely complete work and it encompasses all phases of the preparation and planning as well as all phases of the battle.

Due to the huge size of the two books many of the photos are smaller in size, but all are worth careful study. There are many different types of tanks and vehicles pictured.

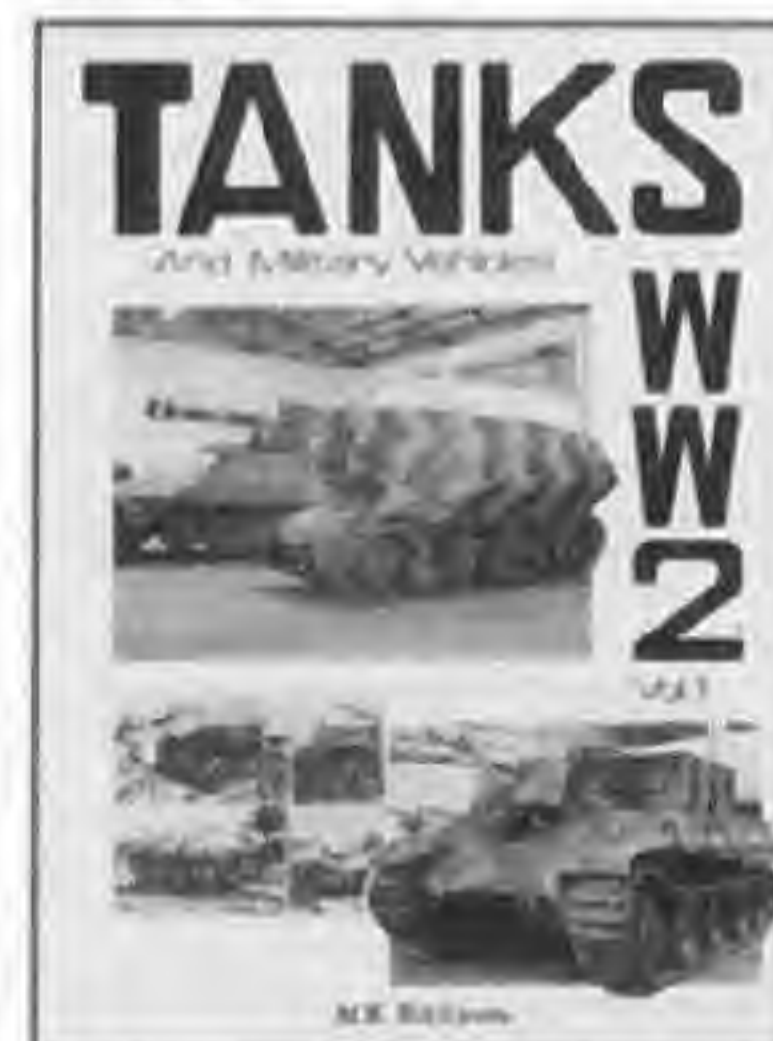
Local architecture and landscape are well depicted; these books are brimming with diorama ideas.

Don't let these books pass you by. Expensive? Yes, but these are the type of books you'll be showing to your grand kids. Worth every penny.

Tanks WW2 And Military Vehicles

Soft cover, 80 pages, B&W and Color.

\$32.00



TANKS WW2 AND MILITARY VEHICLES (V01.1) from MK Editions is a great publication for modelers and military buffs alike. The book, edited by V. Deygas, consists of black and white and color plates of models under construction, dioramas, real vehicles in museums and many drawings and scale plans. The text is in French, but

there is a nineteen page insert which translates both text and picture captions.

There are several vehicles covered and each author gives a detailed account of his scratch building and detailing. The authors often mention the various kits that are available for the construction process, thus providing us with a wider choice for the kit being built. The article on the Sherman family provides a large insert page which cross references the various Sherman types and the manufacturer of the kits. One can then decide which kit should be used for a specific Sherman type.

The vehicles covered are 10.5cm le FH18 (Sf) auf Geschutzwagen, the Sherman family, Jagdpanzer 38 (t) Hetzer, M7 Priest, DUKW and SdKfz 179 Bergpanther. Other subjects covered are the Stencil-It photo-etched stencils and the expansion of the tank museum at Saumur.

The book contains eighty pages printed on quality paper giving fine photo reproduction and excellent color. This book is well recommended for detailing any of the vehicles covered and we look forward to part two of this series, which will deal with Normandy.

Tanks of World War Two

By Jean Restayn.

Hard cover, 144 pages, full color throughout.
\$29.95



THIS NIFTY BOOK IS A COMPILATION of many of the armor illustrations that originally appeared in the French magazines Militaria and Steel Masters. These are the uniform and history, and armor modeling magazines respectively. There are over 360 full color paintings and virtually all the combatants are represented, from

Panthers, to Crabs to Japanese tankettes. You'll get good use out of this one, as there are a real variety of schemes represented.

What really has us all excited is the fact that all the relevant captions and text are now in English. Bonus!

The book represents a pretty good value too, coming in at just shy of thirty bucks. Not bad for a hard cover book with this many color plates.

VP Showcase Number 5

Soft cover, 36 pages, full color throughout.

\$15.95



THE VP SHOWCASE HASN'T BEEN around for a while. The last one was published about three years ago. It got its start as the 'Verlinden Way' which were little 7 x 10 modeling manuals. These evolved into the larger showcase formats, which were just full of big, crisp, bright photos of both Francois Verlinden's work, and later, the work of several other talented modelers from around the world.

The latest in the series showcases exclusively the work of Andres Noßmann. Mr. Noßmann, a German modeler who works as an illustrator, has quite a body

of modeling work under his belt. The book covers seven of his dioramas and these are mostly of German themes from World War II. All are quite ambitious and contain at least two vehicles and several figures.

Our favorite was the Sturmtiger sitting abandoned in a flooded field. Modeling water is a tricky proposition and he pulls it off very well. These books are always good for the dreamer and are an great value for the buck.

BMP-1 Soviet Armoured Fighting Vehicle in Detail

Green - Wheels Line No. 1.

Soft cover, 48 pages, B&W and color.
\$15.99



THIS BOOK IS THE FIRST in a brand new series of modeler's guides from a publisher in the Czech Republic; RAK. The product is being marketed by our good pals at

Eduard, the photo-etched brass people.

This first title is devoted the Russian BMP-1 APC and it is a true modeler's guide. Its 48 pages are chock full of photos of the vehicle including dozens of interior and exterior shots, both close-up and overall. The photos are supplemented with a wonderful series of drawings that start with excellent four-view plans and continue with detailed renderings of the interior structure, crew layout, engine details, and... well just about every little nook and cranny of the BMP-1 you can think of. To top it all off, the final pages contain six color profiles of the vehicle, complete with color matches from the Testor Model Master paint. What more could you possibly ask for?

This little book pretty much knocked us over with the amount of detail between its covers. It's a superb bargain at sixteen bucks. If you've been waiting to crack open that old DML BMP, now is your chance!

KV-1&2 Heavy Tanks 1941-1945

Osprey New Vanguard Number 14.

By Steven J. Zaloga, Jim Kinnear & Peter Sarson.

Soft cover, 48 pages, B&W with color illustrations.
\$11.95



THE LATEST IN THE "New Vanguard" series, this book continues Osprey's effort to reorganize its popular armor series.

This title spins off the subject of the KV series of Soviet heavy tanks. Unlike the previous volume, which crammed both the KV and the IS series into one thin book.

The coverage of its development is quite complete. The text is accompanied by a single line drawing of each of the many variants, along with a brief caption. A fair amount of good quality photos help illustrate the series and there are some fascinating shots of the early tanks, like the SMK and T-100.

Like the other new books in this series, there's a generous portion of excellent color illustrations by Peter Sarson. The standard cutaway is included and it's keyed to various details throughout the vehicle. A KV-1 Model 1941 is depicted. The remainder of the plates illustrate the different color and marking schemes applied to the KV series. One of the plates shows two captured German KV's outfitted with Panzer IV cupolas, and one is outfitted with a 7.5 cm L/43 gun. We'd like to know more about that!

Definitely one of the better of the new Vanguards. Russian armor nuts will agree. It's Pravda!

M3 Lee/Grant in action

Squadron Signal Publications.

By Jim Mesko.

Soft Cover, 50 pages, B&W with color illustrations.
\$9.95



PRESENTED IN THE WELL recognized 'In Action' series format, this book is the first we know of dedicated to just the M3 medium tank. Readers familiar with the series will find the short text,

lots of photos, and color artwork to be up to Squadron's usual style and it is a good reference to have when building your next medium tank. Many of the photos are rehashes from other books (mostly Hunnicutt's M4 Sherman book), but the author did consult Richard Hunnicutt who offered up some very nice new flicks of the M3 that we're sure you haven't seen before.

The line drawings are basic and follow the patterns of the M4 tome, but be careful of the ones on page 6 that show the M2 and M2A1. Both are flawed in the bogie department and should not be used for more than a guide to the hull shapes.

The color artwork is pretty and shows some interesting vehicles and schemes but beware of some of the colors used. The use of dark green paint before the change to one-color olive drab is not documented, so be careful.

Bonus sections are included on the M31 recovery vehicle, the Canal Defense Light and a few of the other variants such as the tractors and mine removal tanks. We recommend this book on the condition that you not consider the text or the artwork to be fully developed. While not the final word on the M3, it is worth having for the photos alone. The interior shots will help anyone who wants to flush out the inside of the cavernous old Tamiya offering.

The history of the Fallschirm Panzerkorps Hermann Göring Soldiers of the Reichsmarschall

J.J. Fedorowicz Publishing.

By Franz Kurowski.

Hard cover, 474 pages, B&W.
\$45.00



FEDOROWICZ PUBLISHING HAS MADE quite name for itself, translating and publishing a whole slew of German unit histories. Each is very crisply and competently printed, and the length of the current list is most impressive. Each book is approximately 6 by 9 inches in size and they all sport a very handsome color glossy hard cover.

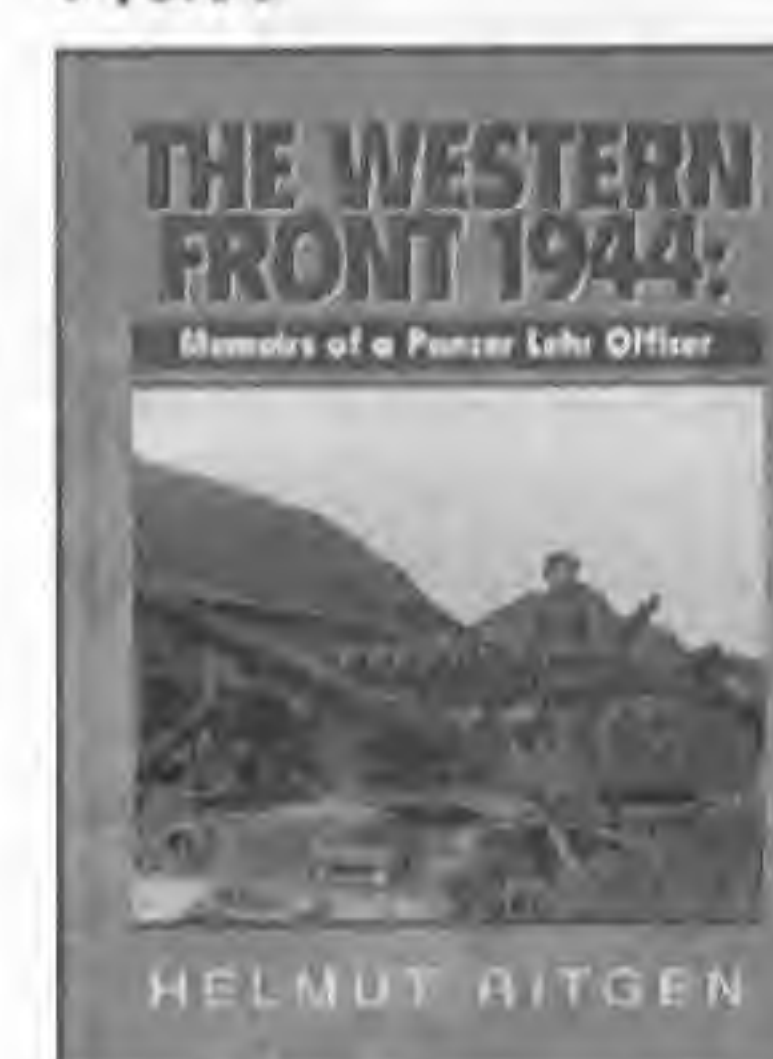
The latest in the series is a complete rundown of the Panzerkorps Hermann Göring. From its beginnings as Göring's personal bodyguard to its deployment as a full division. Like the rest of the series, the coverage is extremely thorough and detailed. Almost every aspect of the divisions business is documented. The text is generously supplemented with dozens of maps, charts and documents, and there are several B&W photo sections. A really great read for the German armor buff, aficionado, maven, devotee or geek.

The Western Front 1944: Memoirs of a Panzer Lehr Officer

J.J. Fedorowicz Publishing.

By Helmut Ritgen.

Hard cover, 330 pages, B&W.
\$45.00



THE SECOND OF TWO NEW TITLES, Western Front deals specially with the battles for France, Belgium and Germany in 1944/45. This is specifically Herr Ritgen's personal account of these conflicts and as such, the book is filled with fascinating anecdotes of combat and "soldiers stories." As in the HG book, there is a terrific amount of supplemental maps, documents and B&W photos. Many of the photos are from the author's personal collection and are rare.

By the way, this is the same Helmut Ritgen that authored the history of the 6th Panzer division (Vanguard #28) for Osprey back in 1982. This little volume was significant because it contained color photos taken by the author during his service on the "Ostfront." The book only contained six photos... We wonder: where are the rest? Anyway we digress...

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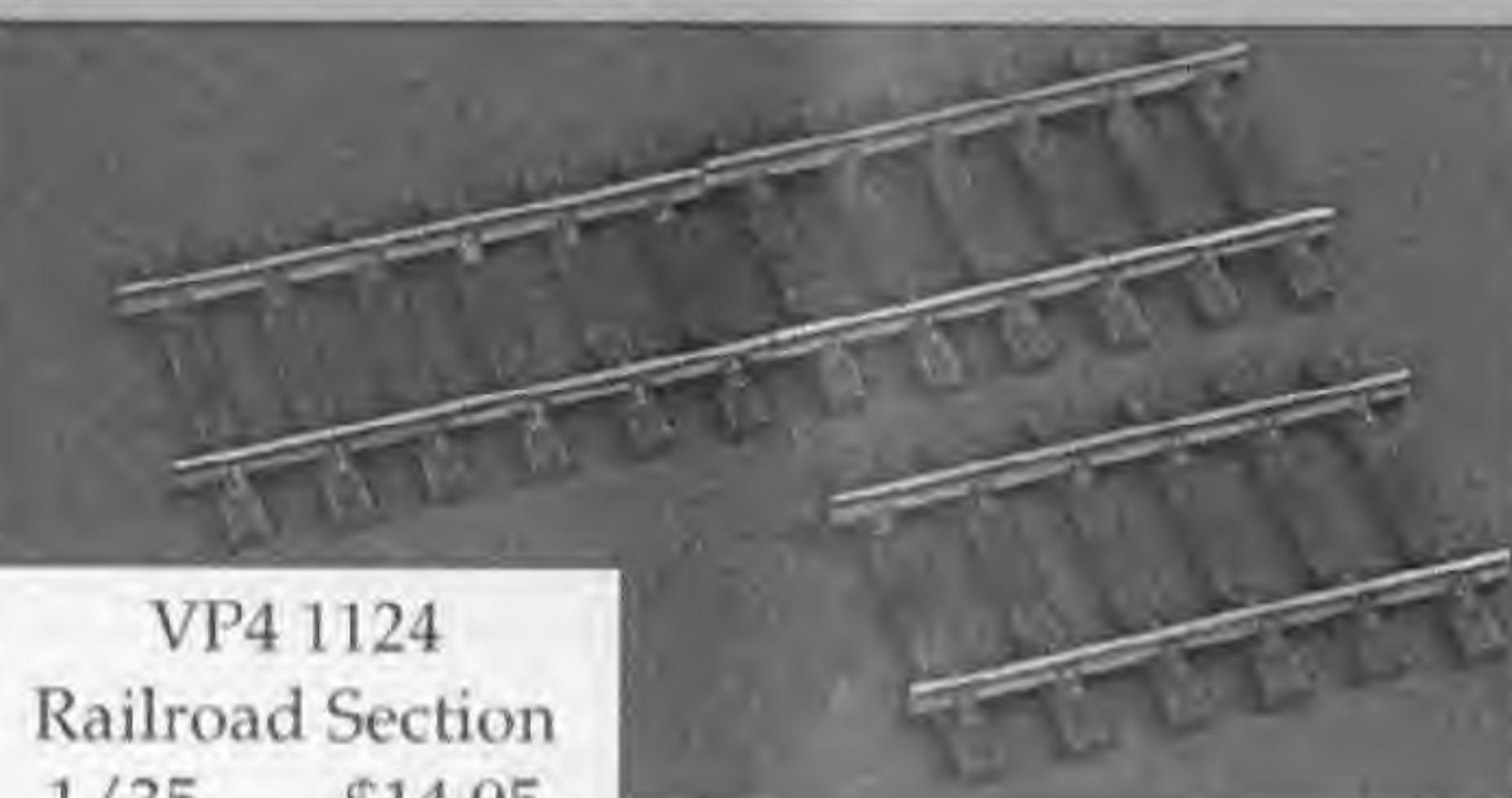
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The Sherman Tank: A Fragmented Look



PART 3: TRACKS

by Pete Harlem

In this, the shortest of all the installments, I bring you the basic parts of the Grant/Lee/Sherman tank tracks. I have also presented a catalog of tread block types that can be used to identify the tracks in your favorite photo or on your favorite miniature vehicle. And finally, I have put together a partial listing of what types of tracks come in which kits.

General

The Sherman series tracks trace their heritage back to the T5 tank built between WWI and WWII. The Phase III version (T5E1) of that tank had track blocks that were 16 inches wide (all widths include the pins) that were the granddaddies of all M3/M4 tracks to follow. In appearance it had the same look as the T41 rubber block track used on the M3. The immediate predecessors to the M3, the M2 and M2A1, had 13.25 inch and 14.25 inch wide tracks but these were on a much lighter weight tank.

The suspension on the M3 Grant/Lee series was called the Vertical Volute Suspension System (VVSS). The tracks on a VVSS tank were driven at the front by toothed sprockets, had three bogie trucks per side with integral return rollers, and had an adjustable idler wheel at the rear of the hull. The track's guide teeth performed two functions, keeping the wheels on the track and keeping the track on the sprocket. The track was "live" meaning it was designed to want to roll up when flat, a feature that helped keep it on the idler wheel. Most importantly, they were relatively easy to maintain. The VVSS system was carried over into the Sherman tank.

All VVSS tanks with the exception of some Canadian built vehicles, used tracks which were made up of track blocks (also called shoes) each of which were either 16 or 16.56 inches wide with a height (pitch) of 6 inches. Thickness varied depending on the type of block pattern installed. **Figure 1** shows the basic track parts using the T41 block in this example with a typical guide tooth end connector.

There are two steel pins protruding from each block. The pins have a beveled notch on the outward side that is inclined at 7.5 degrees. The end connector is slid over the pins of two adjacent track blocks thereby keeping them in line. A special wedge shaped bolt is inserted into a cutout in the bottom of the end connector which engages the inclined notches in the adjacent track pins. A self locking hex nut is applied to the top of the bolt and tightened until the wedge pinches the notches causing the pins to rotate slightly. This creates the torque that makes the track roll up when off the tank. The total inclination caused by this is 15 degrees since each block has two pins affecting it. When one of the track pins becomes loose in the block the block loses this ability and is then referred to as a dead block.

Figure 2 shows the common T48 track block assembled into a two part section from all angles. In the front view I have shown the relative size of the bogie wheels and this and subsequent drawings are at a constant scale of 1/15th. Note the notches in the track block pins.

In 1944 a new version of the Sherman arrived at the front with an all new suspension design. Called the Horizontal Volute Suspension System (HVSS), it was referred to as the E8 suspension in testing and that name sticks today as Easy Eight. Regardless of what you call it, it featured slightly different diameter road wheels, now in pairs on new bogies, had new rubber rimmed idler wheel pairs, independent rubber tired return rollers, and wider drive sprockets to handle its nominal track width of 23 inches. The block pitch remained the same as the VVSS tanks at 6 inches, and

A) Standard Short Hull: 158 shoes (79 per track); includes all versions of the M3, Grant, M3A1, M3A2, M3A3, M3A5, RAM I & II, T6, M4, M4A1, M4A2, M4A3, M4A3E2, M10, M36, M7, and M12. Ground contact length was 147 inches for VVSS or 151 inches if using late HVSS system but with the same number of shoes per track. If you install 5 track blocks on the idler wheel and 5 on the drive sprocket then 32 blocks cross the top run, 24 make up the contact patch run, 5 connect the drive sprocket to the contact run, and 6 connect the idler set to the contact run. On the real tank the contact patch run covers 147 inches of ground.

A1) Some Canadian built M4A1 (called Grizzly) and some Ram and Sexton tanks had Canadian dry pin tracks called CDP. This was a single pin dead track made of steel that looked a lot like the track on the Panzer III except it had two guide teeth molded on each shoe. It ran on the normal VVSS bogies and road wheels, but the pitch was only 4.6 inches and the width of each block was 15.5 inches. Tanks fitted with it can be easily identified by the special drive sprocket this smaller track required. The contact patch was the same length as normal VVSS tanks at 147 inches but the small pitch meant that 204-206 blocks were used with either 102 or 103 on each side depending on the track tension used. I have not shown it here.

B) Long Hull: 166 shoes (83 per track); includes all versions of the M3A4, M4A4, SHERMAN V&VC, and M4A6. These hulls are longer because of engine differences and can be recognized by the wider spacing of the bogie trucks. The ground contact length was 166 inches (VVSS). The spacing of blocks is the same as above except the top run and contact run have two blocks more each (34 and 26 respectively).

C) Special Hull: 172 shoes (86 per track); includes the M40 155mm SP gun and the M43 8-inch howitzer motor carriage. Both of these self propelled guns used

the HVSS suspension exclusively. More track shoes were used on these vehicles, but the ground contact length was only 164 inches which is shorter than the M4A4 pattern.

Block Types-VVSS

Track blocks were made of several materials and the pattern on the ground facing side varied depending on application and manufacturer. There were several basic types of track block used and each came with one or more types of grouser detail. Rubber blocks were the norm up until mid-1942, when natural rubber became too scarce. Steel track shoes were then designed and put into production and these were found to wear better, but had a number of disadvantages including the ability to tear up paved roads. Composite construction was also used where a steel

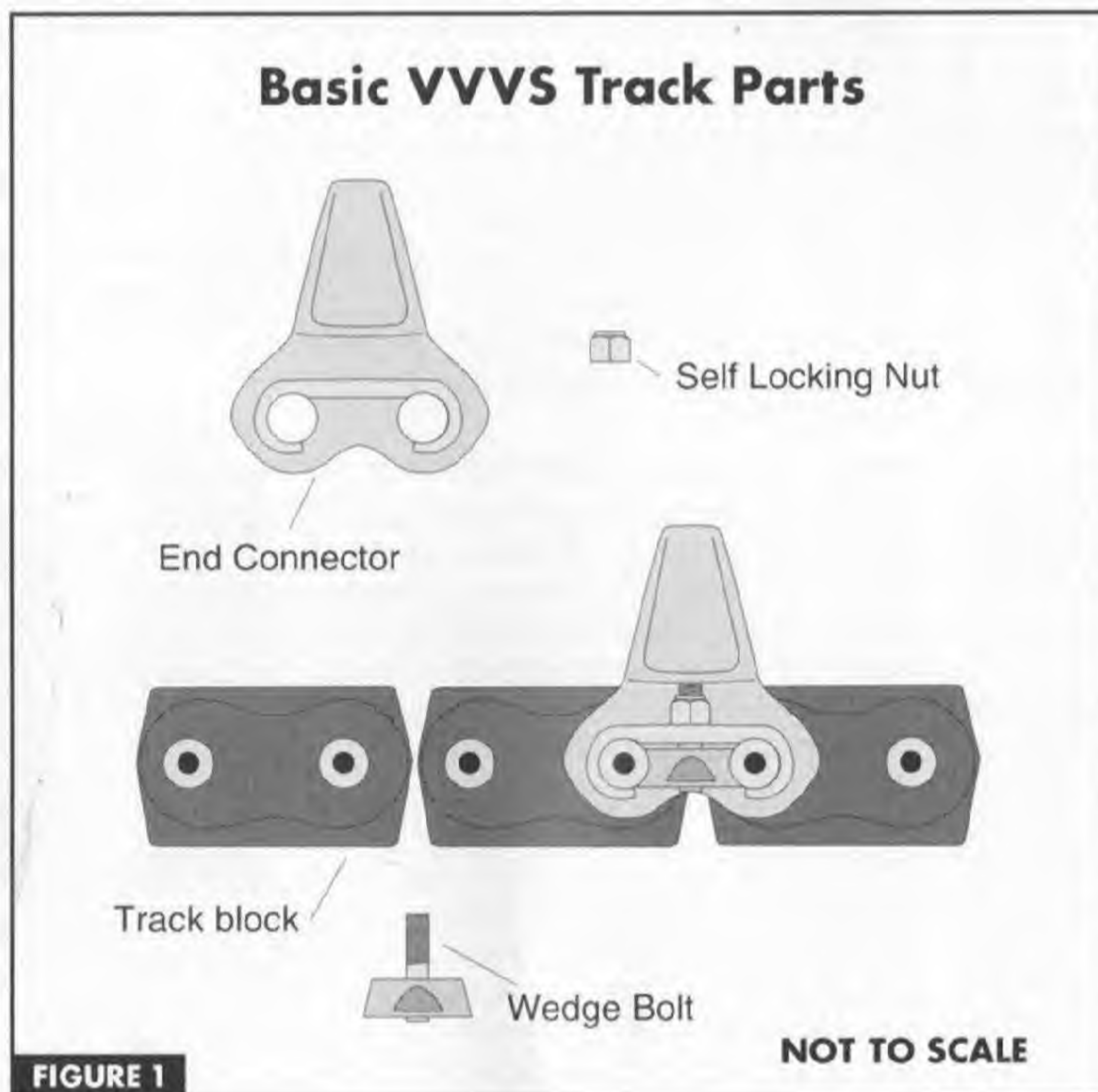


FIGURE 1

hulls so equipped used the same number of shoes as the older suspension.

Figure 3 shows a typical HVSS track block and how it appears with the wheels on it. The guide tooth is in the center now and is bolted to a bracket that traps it to the track pins which are exposed between the block halves. The end connectors are just that and do not have guide teeth. They have a small metal reinforcing strip on the bottom of the outer flange that was mounted on the grouser side of the track block. A wedge bolt holds each end connector on and torques the blocks to make the track "live" as before.

How Many

The number of track shoes used on each type of tank varied with the type of vehicle. Three tank chassis lengths were used as follows:

T48 Track Alignment

1/15 SCALE

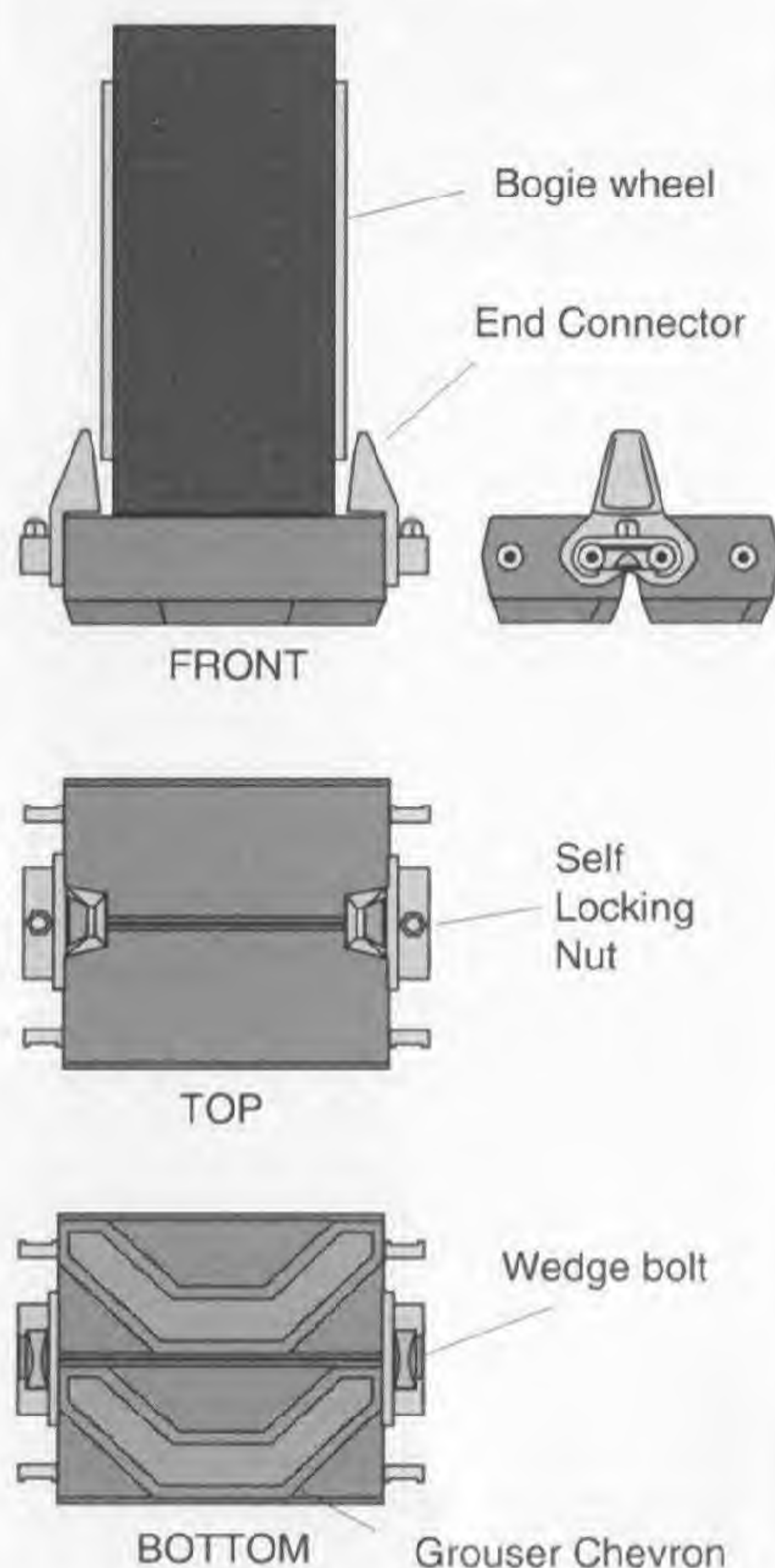


FIGURE 2

cleat was married to a rubber block to gain the benefits of both materials. Each type is described in turn below. Note that all VVSS track blocks were 16.56 inches wide unless stated otherwise.

Rubber Block Track (Figure 4, A)

T41 - This prewar design was the first production track used and because it had no grouser, it could be reversed for improved wear. It was the thinnest block used and was 16 inches wide. It can be recognized by looking at the drive sprocket teeth on tanks equipped with it. If the track face is flush with the tips of the teeth you are looking at this track or an extremely worn set of T51 tracks. This type was very common on all versions of the M3 even though production ceased early in WWII. A few M4 or M4A1's might have used it.

T51 - Another production track and similar to the T41 but not reversible. The bottom side that runs on the ground was thicker and that's how you can recognize it compared to the T41. Again look at the sprocket teeth, and if the face of the block sits well above the sprocket teeth, then it has to be a T51 block. It was fairly common on late war M3s (all types) but very common on early Shermans such as the M4, M4A1 75mm, M4 composite, and early M4A2s. And it was also common on the M7 in early WWII. The smooth face of this track and the earlier T41 were prone to slipping on soft surfaces, so all other types featured grousers molded into the block face.

WE210 - This block was designed for use on British and Australian service M3 Grants and Lees and like the T41, it was only 16 inches wide. Modern English sources call it the "double F" track (or "waffle") but it looks like a double "H" to me. Anyway, it was the

thickest rubber block used, and actually raised the tank about one inch. The deep cutouts were an attempt to deal with the sand in North Africa and many 8th Army M3s had these shoes. Ram II tanks also commonly used this track.

T47E1 - This track is shown in Hunnicutt's Sherman book but I have not found any pictures of it on any tanks. It was the first of the "parallel bar" tracks shown, but unlike the later designs, this one had two long bar cleats at the bottom of the block face that make it easy to recognize. Not a common issue item.

T48 - This was the most common Sherman rubber block and is easily recognized by its wide chevron grouser. It was considered production for the M3 series too but only a few tanks late in the war will be seen with it. However, almost all types of M4 used it. The chevron gave better traction cross country compared to the flat face blocks and was kind to paved highways. However, with heavy use over long periods of time, the chevron could wear completely off until a nearly flat block remained. For that reason, well worn T48's are sometimes hard to spot.

T74 - This track introduced a narrow curved chevron and was the rubber version of the T54E2 steel track block. Again, it is shown in Hunnicutt, but I don't think you will find it used much.

Steel Block Track (Figure 4, B)

T49 - This was the most common "parallel bar" track used. It was a production track type for both the M3 and M4 and it will be found commonly in photos of Shermans used in the South Pacific Theater (USMC M4A2s for example), on Army tanks in Sicily and Italy, and sometimes on certain specialty vehicles (M32's for example). I think it was designed for use on tanks that made beach landings which would explain its unusual pattern.

T54E1 - This was a common track on the Sherman series with a narrow angular chevron. It was the only track with this chevron pattern and can be further recognized by the small bump stops at the center margins and the rectangular holes just below the wings of the chevron. This track was most common on the M4A3 and M4A1 later in WWII.

T54E2 - This was the Chrysler designed "Cuff" block. It had a curved chevron grouser and it may have been common on many export M4s. Hunnicutt does not list it as a production item for any tank but does say it won a competition for steel links and selected for "immediate production." Other sources say it was "the British track." You decide.

T56 - This was another all steel "parallel bar" track link that differed from the T49 in having three small rectangular depressions across the center face. It was not a normal production track it would seem, and should be considered rare.

Composite Block Track (Figure 4, C)

T56E1 - This was a composite construction track with a modified

chevron shape that was part curved but has a flat bottom at the apex. Two cutouts that intrude partially into the wings of the chevron provide room for the studs that kept the rubber block and steel cleats together. A third stud was placed in the center above the apex of the chevron, but in line with the other two studs. Other sources also call this track "the British track," but I've seen it occasionally on American M4A3 105mm and M4A3 76mm tanks.

T62 - This was another composite rubber/steel block with an angular chevron cleat and the three studs across the face that hold the components together. This was not a particularly common track, but I have seen one M4A1 with a set.

T62??? - Not shown was another common track that looks like the T62 but has a chevron grouser cleat with curved corners. I've seen several of these on Shermans but whatever it was, it is not identified in references so I am unable to number it. It was a composite track type also.

Duckbills

Tanks are designed with a specific ground pressure in mind (expressed in PSI numbers) but sometimes this value exceeds the conditions of the terrain. In mud in particular, the weight of the tank sinks it until it becomes bogged down. When this happens the crew must spend a lot of time digging the vehicle out of the mud in order to return to combat.

One device invented to eliminate this tendency and also to offset the weight increases on some versions of the tank, was the extended end connector. It was commonly called a duckbill because it looked a bit like that

HVSS Track Alignment

1/15 SCALE

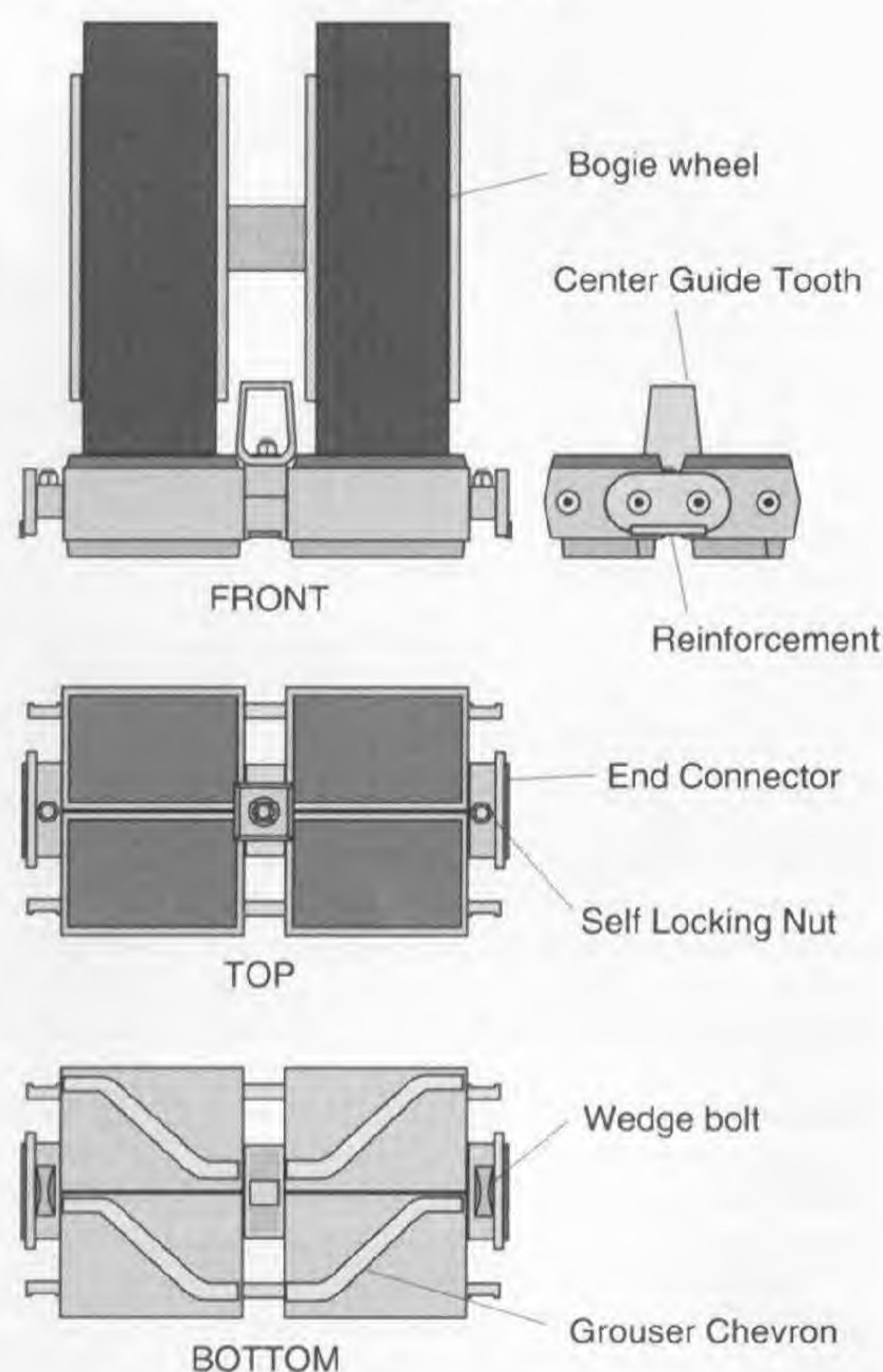


FIGURE 3

part of the duck's anatomy. It comprised a modified toothed end connector with a metal extension that protruded horizontally out from the track side to increase effective block width. These were used on many tanks in the winter of 1944/1945 and thereafter, and two types were common.

Figure 5 shows both types. The track blocks shown have the most common duck-bill installed and you can see what it looks like in the various views. Below that I have shown the less common variety which was a simpler design. The first type was cast integral with the track tooth, whereas the second type was made by bending metal sheet around an existing end connector and welding it in place. The second type was slightly longer and could be made and repaired in the field.

Sherman Jumbos (M4A3E2) almost always had duckbills installed, usually on T48 tracks because their extra armor plate overburdened the suspension a bit. Also, a modified suspension was developed for Shermans that used duckbills on both sides of the blocks yielding a 23-inch wide track. In order to make this work, the vehicle had to be modified by spacing all the suspension components away from the hull by 4.5 inches. Although extremely rare, tanks with this rig were given the E9 suffix (ie. M4A3E9). The HVSS suspension came along before many E9 tanks were made, making this improvement obsolete. However, it was seen on many post-war variants like South Korean M36B2's and Pakistani M4's.

Grouser Bars

Figure 6 shows the two main types of add-on grouser bars applied to the Sherman tank. Grouser bars were added to smooth face tracks for additional traction particularly on ice because they acted like snow chains on a car tire and increased ground pressure on parts of the track run. Two types of grouser were produced differing only in minor details. The one labeled T51 was the later type found more commonly on T51 tracks. When installed, grousers were spaced apart with at least four and as many as six track links between each one.

Each grouser bar mounted to the end connectors between two blocks which was accomplished by taking the bar apart and inserting the pins on one side. Then the outer part was installed trapping the track between the grouser end pins. Because the grouser installed into the ends of a connector, duckbills and grousers were incompatible, but I have seen tanks with duckbills installed except on the blocks where the grousers are located. It seems strange to carry both parts that affected ground pressure at the same time but such tanks did see combat.

Block Types-HVSS

Late in WWII the new HVSS Sherman suspension came into use that used horizontal volute springs on each bogie truck. Three track types can be found on tanks with this suspension

T66 - This was an all steel cast track link with single removable pin between each shoe. It was similar in design to late-war German tracks such as those used on the Panther. The T66 was based on the T65 track used on a few prototypes and it was a common track on late war M4A3E8s and M4A1E8s. The pin was held in place by four studs that engaged notches in the pin that were aligned with the holes provided in the track

block. It had a double curve cleat and a molded-on center track guide tooth (not shown), whereas the T65 that preceded it had dual outside guide teeth. The T66 added 2950 pounds to the weight of the Sherman compared to the older VVSS tracks. Ground pressure was a mere 11 pounds per square inch with this 23-inch wide track. It was also used on the early versions of the Pershing.

T80 - This was a steel track shoe with bonded rubber inner pads and narrow width curved chevron grouser detail on the outer surface. It was a common track appearing in small numbers by the end of WWII but was in widespread use on Korean War Shermans. M40 and M43 motor carriages used this track also. It was heavier than the T66 and added about 1,800 additional pounds over a HVSS Sherman with the earlier steel tracks. One of the T26E3 Pershing prototypes used this track in Europe and it was also a common sight on Korean War Pershings.

T84 - This was a rubber block design similar to the T80 but with wide rubber chevron grouser cleat on both block halves. A removable center guide tooth was also used and it was a very common post WWII track type, particularly on vehicles driven frequently on paved roads (such as at Stateside bases or on garrison duty in Europe or Japan). M40 and M43 motor carriages used this track. Again, it was used on the Pershing and also on the M46. It became the father (mother?) of all the tracks used on American armor for years to come.

Modeling Tracks

Sources for track include both tank kits and a number of after market conversion kits. The list below is contains some items that are now out of production,

but are still circulating. Nothing really ever goes away in this hobby. Where something is particularly hard to find, I've tried to note it.

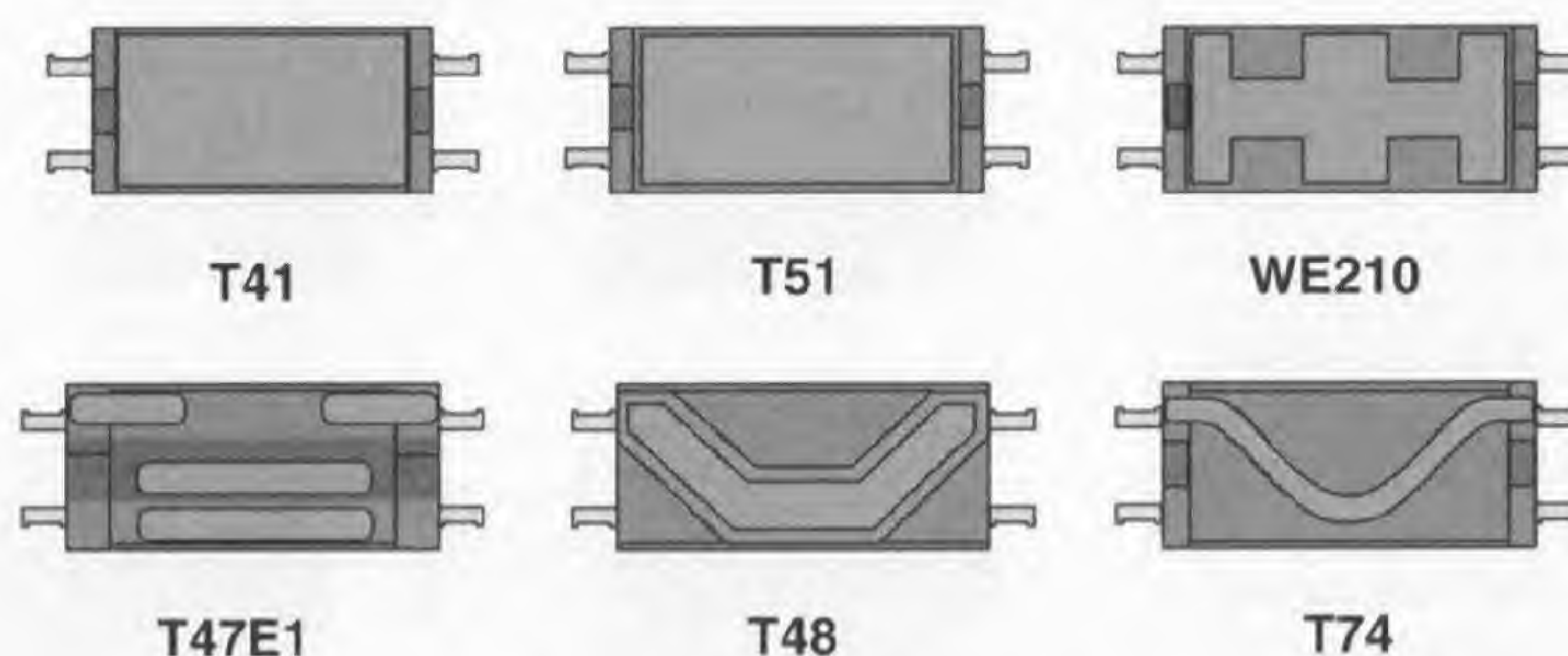
Tank Kits

Nichimo - The M4A1 75mm Sherman in the Nichimo kit comes with a set of silver vinyl tracks that are bad examples of the T48 track. The problem is the wide spacing between track links and the lack of accurate end connectors. I recommend throwing these away.

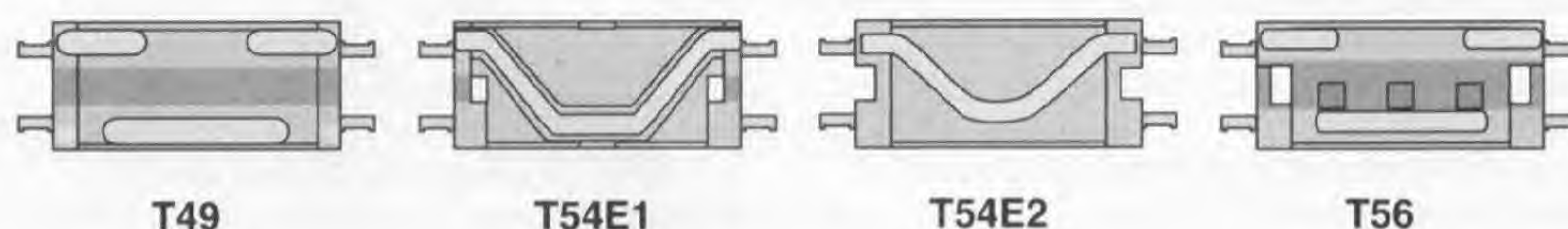
Tamiya - Tamiya has sold from time to time two kits of the M3, one with Grant features. Currently only the U.S. pattern Lee tank is available and it comes with T41 tracks. These are terrible in that the end connectors are installed on each block instead of between the adjacent blocks. Tamiya also has released several different Sherman kits on the market over the years, but currently sells two in 1/35th scale. Their old M4A3 kit has nice looking T54E1 tracks that suffer slightly by not having the two small rectangular holes at the sides of each block and more importantly are not the correct width being closer to 16 inches in scale. They do come with the welded type duckbill end connectors which can be cut off to get the plain track, an option I like, and the tracks were used in the M4A3E2 Jumbo kit as well. The new M4 kit released late last year has very nice T48 rubber chevron tracks made in a new plastic formula that can be glued together.

Italeri - This company makes a number of Sherman variants. The M4A1, M7, Kangaroo, Jumbo (misnamed M4A3 76mm), and M32 kits all came with reasonably good T51 smooth rubber block track. The outer track

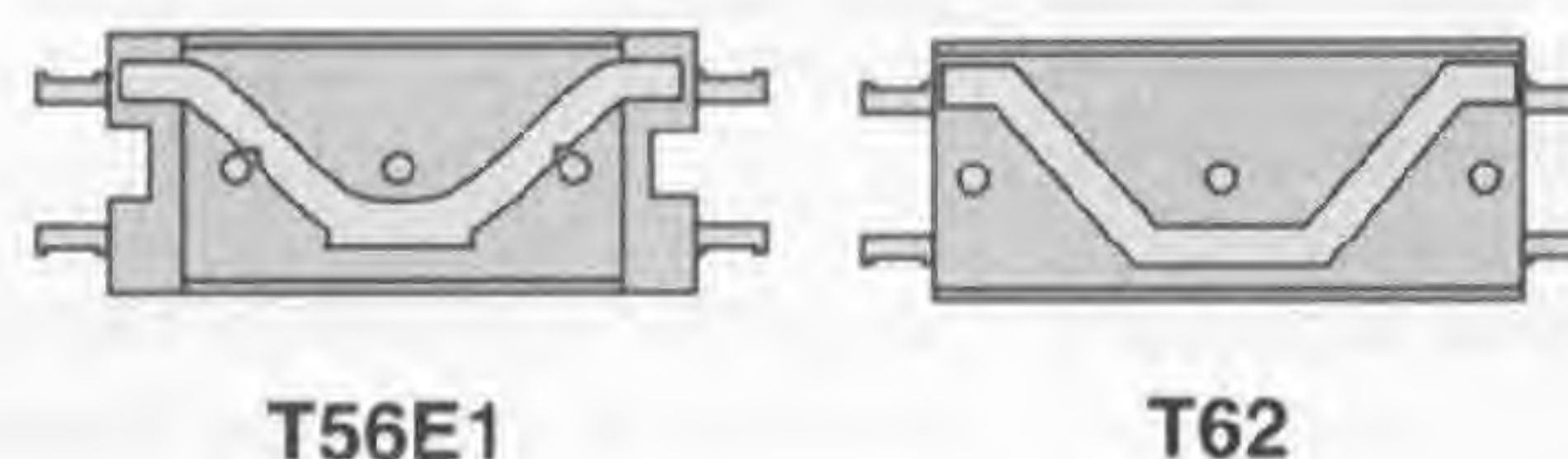
VVSS Track Blocks



A - Rubber Block



B - Steel Block



C - Composite Block

1/15 SCALE

FIGURE 4

pad is too thin but is acceptable for a worn T51 track. The new M4A3 Calliope kit has tracks of T54E1 design and these are well molded.

MP - This company is no longer producing, but stocks of its kits are still being sold by Chesapeake Models and can be found. They offered both an after market track conversion for the HVSS suspension and a full kit of the Israeli M-50 tank. Both had reasonably good T80 pattern HVSS track and these appear to have good proportions.

DML (Dragon) - DML has several Shermans to offer and unlike the other companies, a new kit release often includes another track type. All have been link to link construction. The first kits were M4A3E8 tanks and two track types were offered. The Korean War release has T80 tracks whose only limitation is that the inside rubber pads are a bit thin, and the WWII release has nicely rendered T66 steel tracks.

The same T80 tracks are available in a separate kit with just the HVSS suspension and tracks.

Also in link to link are the tracks offered in their M4A4 hulled kits (three releases so far) which all have the curved chevron version of the T62??? composite block mentioned above. These have separate end connectors so you get the fun of laying track like the real thing.

DML has announced the upcoming release of a set of T48 link tracks as well as a new M4A1 kit that will include them. Should be nice.

Conversion Kits

Since I only have a few of these, I can only make a few comments. Most are readily available from any decent mail order source.

Accurate Armor - AA makes resin links and sections made up of numerous pre-assembled blocks. Sold in "Trak Paks," the following are known. Our best guess at the type of block appears in parenthesis.

Duckbill End Connectors

1/15 SCALE

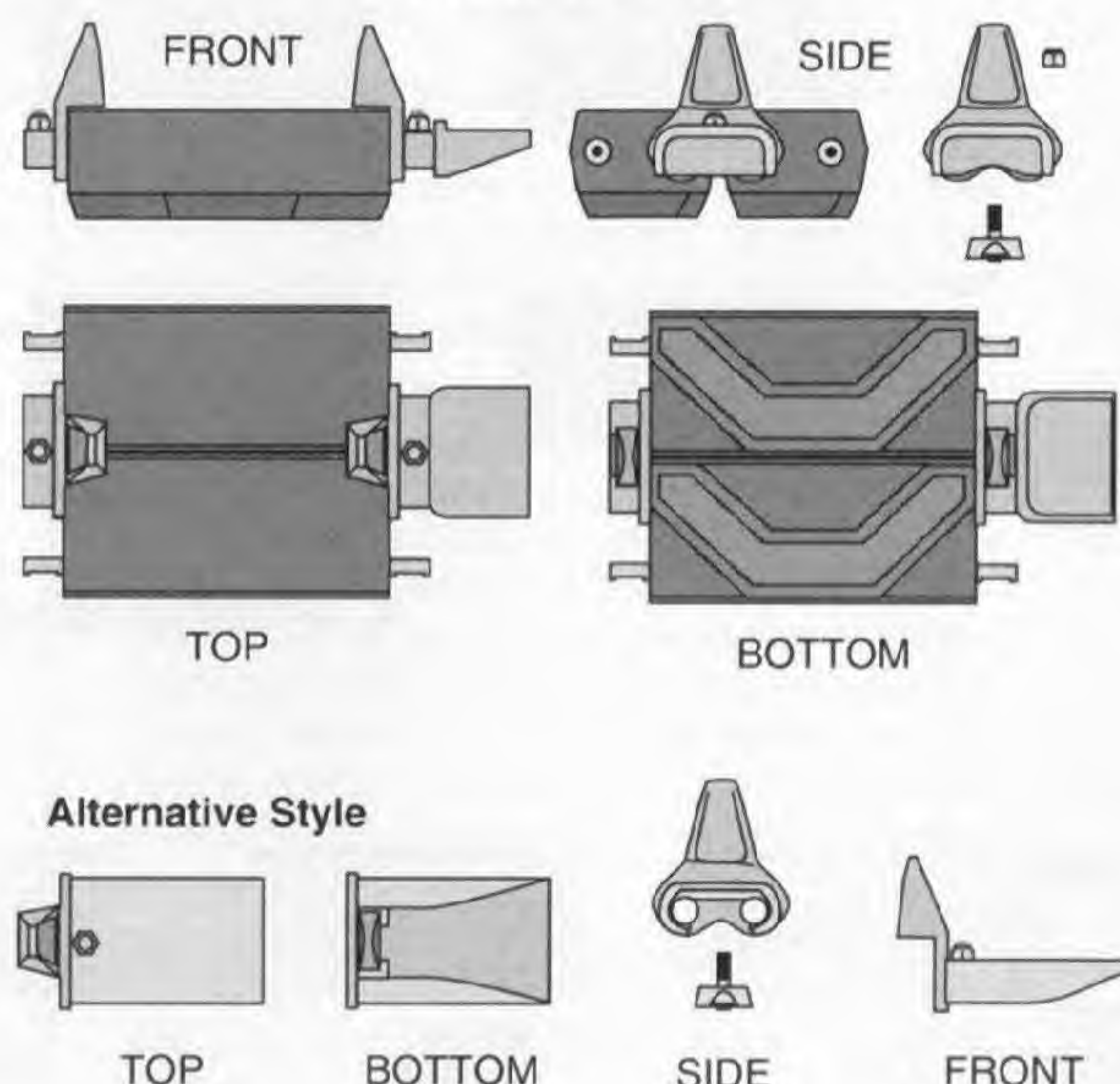


FIGURE 5

- Sherman/M3 Rubber Block (T41 or T51)
- Sherman/M3 Rubber Block w/Duckbills (T41 or T51?)
- Sherman/M3 Rubber Block "I" (WE210)
- Sherman/M3 Rubber Chevron (T48)
- Sherman/M3 Rubber Chevron w/Duckbills (T48)
- Sherman/M3 Rubber Chevron w/Duckbills and Grousers (T48)
- Steel 3-bar Cleat (T49?)
- Steel 3-bar Cleat w/Duckbills (T49?)
- Steel US Cuff (T54E2?)
- Steel US Cuff w/Duckbills (T54E2?)
- Steel British Chevron (T56E1 or T62)
- Steel British Chevron w/Duckbills (T56E1 or T62)
- Steel US Chevron (T54E1?)
- Steel US Chevron w/Duckbills (T54E1?)
- Steel HVSS (T66 or T80)

Cromwell - This outfit offered several Sherman track types, all in resin:

- US Steel Pattern Track w/Duckbills, probably T54E1 type.
- Sherman Double Duckbills. Block type unknown but this is for the E9 suspension modification-see Hunnicutt for more info. (Very rare).
- Sherman British Chevron. Not sure if these are T56E1 or T62 links.

Friulmodellismo - Kit #ATL12 is a set of all white metal Sherman tracks. The block type appears to be the T54E1. The assembly system looks interesting. They are the only ones I know of that are supposed to remain workable. Not essential for live tracks, but it might make for some intriguing diorama ideas.

Gunze Sangyo - I have never seen these and because the product is out of production you may not be able to find them. They were T48 pattern track sets in white metal with plastic end connectors.

ModelKasten - This prolific producer of track sets offer up all-plastic parts with T48 chevron pattern and include 160 links, kit #K-10.

Tank Workshop - This equally prolific producer of resin stuff has kit TTWD1011 Spare Track Links, which is a bag of 30 T54E1 track blocks molded on one side only for use as supplemental armor.

Top Brass - TB offers complete track sets made of styrene blocks with white metal end connectors. They also offer track accessory packs that have 18 links which are used for spare track stowage or to lengthen the full sets for use on any M4A4 hull. Don't look too hard for these, they've been real hard to "track" down. They do still turn up in collections and swap meets. The full sets offered are:

TK30: Rubber Chevron. These are T48 block tracks.

TK302?: 3-bar Cleat. Probably T49 blocks.

TK303?: UK Metal Chevron. Unsure if these are T56E1 or T62 type track blocks.

TK304: Double I Cleat Pattern. These are the WE210 waffle track common on the British M3.

TK305: Plain Rubber Block. These are either T41 or T51 tracks.

TK306: US Metal Chevron. These are the T54E1 track block.

Verlinden - The Belgian arms dealer does not have a complete track set but set #565 includes about 25 links of parallel bar steel (T49) track to be used as supplemental armor. You would have to buy 7 sets to get enough for a single tank so this probably isn't the best idea.

Enough said? Join us again next time, Same time, same place. ☺

Grouser Bars

1/15 SCALE

(as viewed from the front)



T41



T51

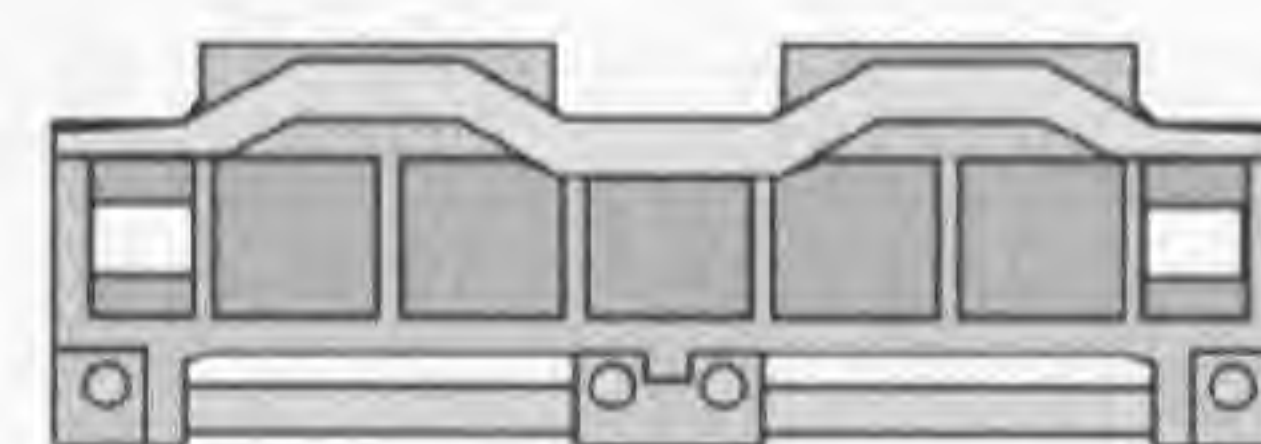


Installed on T51 Block

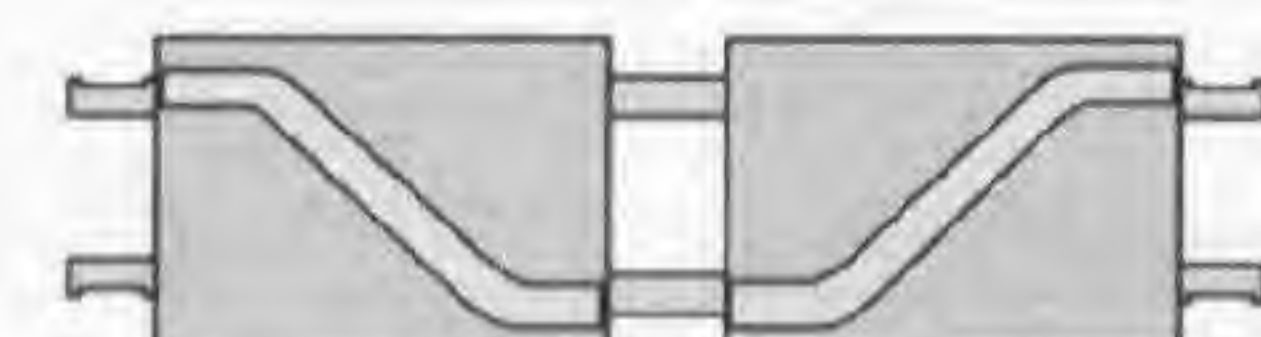
FIGURE 6

HVSS Track Blocks

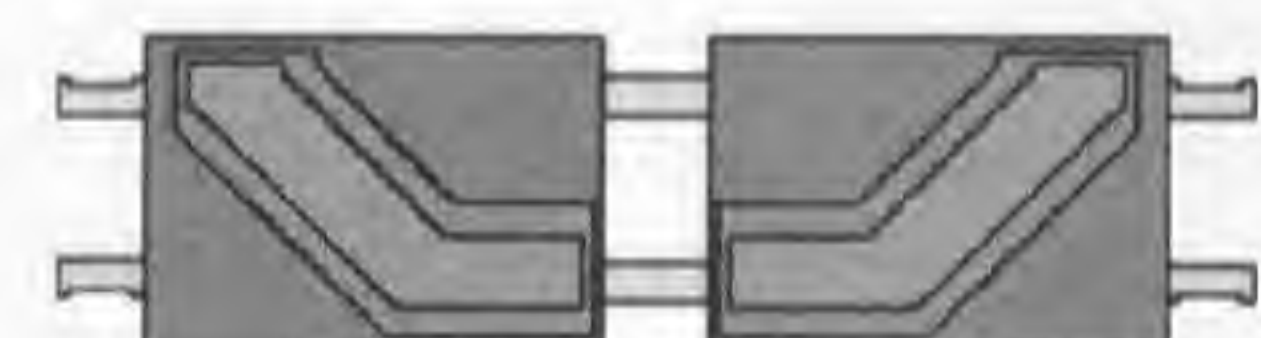
1/15 SCALE



T66



T80



T84

FIGURE 6

Double Takes



Pint-Sized Pugilist

With the vaunted blitzkrieg tangled in the streets of Stalingrad, it became apparent that a weapon mounting a heavy gun capable of demolishing buildings and fortifications would be needed pronto. The resulting vehicle represented the third attempt to mount the very potent 15cm SIG 33 heavy infantry gun on a tank chassis. The other two attempts utilized the Pzkw. I & II in thinly armored open fighting compartments. Development of a new, more heavily armored vehicle began as early as July of 1941. Twelve examples of the initial version were completed in December 1941 and January 1942. On September 20, 1942, Hitler ordered that 12 vehicles be made ready in 14 days for immediate use in the battle for Stalingrad. The original 12 vehicles were rebuilt, and 12 additional were constructed and sent to the front as part of an Infanteriegeschutz company in November 1942.

A second Sturm Schwere Infanteriegeschutz Co. was formed in 1943 as the 9th co., 201pz. reg., 23 pz. div., and seems to have served in and around the Kursk area. The Sturm Infanteriegeschutz 33 was built on a StuG III ausf. E/F8 chassis with a heavy box-like fighting compartment. The main armament was mounted in a sliding gun mantle and offset to the right side of the vehicle.

Only one vehicle is known to have survived the war, and that one is residing at the Kubinka museum in the former Soviet Union.

The kit is all DML and is based on their earlier StuG releases. I was glad to see this, because I think their own StuG kits are far superior to the older Gunze items which are now sold under the Imperial Series label.

Everything is rendered to the usual high standard that we have come to expect from DML. They even include a photo-etched fret of the air intake screens and lots of extras for your goody box.

The chassis builds the same as the StuG's right up to the fighting compartment. I would advise leaving the sprockets and idlers off until after painting. If you do this you'll be able to assemble the whole thing without having to worry about those tracks. A high point to note here is the fit of the bogie wheels to the suspension arms—it is snug and really helps with the dry fitting of the tracks.

A partial fighting compartment is provided which may prove inviting to you more adventurous types. I really liked the gun tube because the rifling is molded into the barrel halves. No photo-etched required!

In step 7, the instructions have you drill holes for the gun travel lock. The kit part does not pivot,

so you'll have to decide whether you want a fixed gun or position the travel lock in a down position. To model it in a down position, you would have to cut it at the clevis attachment point or make a new one that really worked. I took the easy way out and left mine fixed.

My favorite aspect of this kit is the sliding gun mantle and the way it has been rendered. The L-jibs and slide plate work like the real thing. Go sparingly on the glue to insure that everything remains workable. If not, you'll have a tough time fitting the finished fighting compartment over the gun assembly.

The stowage on this kit is pretty sparse, so you're left with some extras. Some of my photos show vehicles from 1943 that are sporting more stowage than the kit provides. One photo in particular shows a vehicle with spare wheels on the front armor plate and a generous amount of spare tracks stored on the vehicle's nose. Raid your parts box for that lived-in look. It would probably ease the painting process if the rear storage bin was left off until after drybrushing.

The only real problem with the kit are some nasty mold plugs on the sides of the fighting compartment. A fill and sand job are required to correct this.

The painting instructions depict a vehicle with a two-tone camo scheme, Stalingrad 1942. I wasn't too sure of the likelihood of this, so I opted for the summer 1943 three-tone camo look. I sprayed the vehicle with a coat of light earth and then gave it a coat of Tamiya desert yellow leaving a hint of the base coat to show through. Thin bands of red brown and olive green were sprayed in random patterns using thinned Tamiya paints. The whole model was then given a subtle over spray of desert yellow to tone down the camo scheme and give it a faded look. A Raw Umber and thinner wash was applied followed by a gentle dry-brushing. These vehicles did not seem to carry much in the way of markings, so a set of Verlinden dry transfers made the job real easy.

For a final touch, I added a length of Hudson and Allen tow cable and H&A tow chains.

It really pleases me to see this rare and interesting variant done in injection molded plastic. I applaud DML for their effort and look forward to seeing many more in the future. ☒

—Nick Vanston

Panzer III: The Story Continues

This is the second in DML's Imperial Series of kits that most of us will remember last seeing with the Gunze Sangyo name and price tag. This latest release is the late war Panzer III M/N.

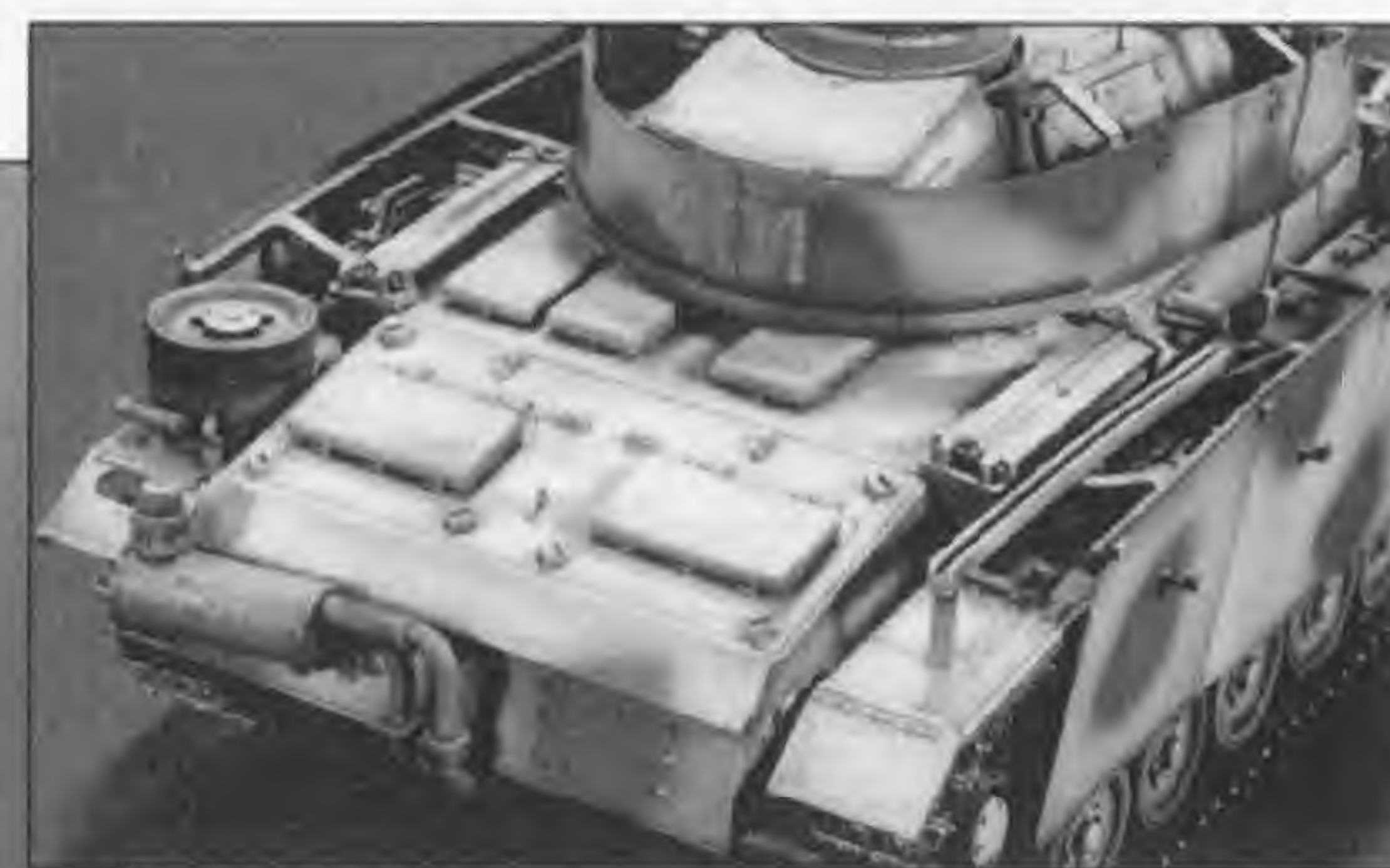
This kit shares the majority of its parts with DML's earlier Panzer III J release with a few added sprues from DML's Stug III A-F kits and a small sheet of photo-etch. Once again, DML is most generous in supplying us with dozens of spare parts for future projects. This kit features both the long 50 mm barrel for the ausf M and the short 75 mm barrel for the ausf N. In addition, it includes parts for the wading gear used on the ausf M/N, including the new style muffler and water tight air-exhaust covers.

This kit also features some really well done hull Schurzen and hangars. This is the first time I've seen Schurzen done like this and I was impressed. Instead of being injection molded they are made of clear .01 acetate on their own sprue. They look as though they may have been stamped out of the material. You simply cut them off and attach them to the hangars for super realistic Schurzen. This is one way these DML guys are able to reproduce a once \$135 kit for \$35-\$39! The results are every bit as good as if they were photo-etch. Unfortunately, the turret armor is not the same, but DML has beveled the edges to produce the illusion of scale armor, a little extra sanding and grinding helps further increase the effect. Photo etched screens are also included, as are nicely done individual track links.

Interestingly, the etched screens were not provided in the earlier Panzer III J, where they were fairly obvious. Here, the screens are somewhat hidden under large armored covers. Oh well.

I encountered no significant fit problems and found the kit very nice indeed. A note of caution: depending on the version you choose, care should be taken throughout construction since the





instructions can at times be a little misleading in terms of which parts go with which version. I got overzealous and momentarily put the wrong mantlet on the 50mm gun. Luckily, I caught the mistake in time.

As in the J kit, DML provides a sprue of their excellent tools. When I first purchased the Gunze Sangyo kit several years ago (and my wife still doesn't suspect), I was extremely pleased with the plastic and brass, but very disappointed with all the white metal tools. DML has provided an excellent solution.

The tracks are the standard DML type. I didn't experience any problems with them. I used liquid

glue for assembly. I like to leave a link on the top and one on the bottom unglued so I can lift the tracks off when they're dry. This way, they can be painted separately.

These represent the later type tracks with the solid horn, which is correct for this version of the Panzer III. DML now makes several versions of the Panzer III/IV tracks, and it's tough to keep tabs on all of them. I believe this set is also available as a separate kit. I found the tracks to be easily the equal of the ModelKasten items found in the old Gunze kit.

I painted my tank to match a color plate found in the Squadron Signal book on the Panzer III (2024). The vehicle is in the center section of the book and the illustration depicts an odd-ball scheme of large red-brown patches outlined with dark green.

I started out by painting the whole model black, then going back over it with light coats of dark yellow. This results in a more tan shade of the dunkelgelb, which I think is more accurate. I then added the large patches, outlining with the green. I chose not to add as many patches as the illustration showed, to keep the effect from overwhelming the model. The kit's decals finished it off.

I'm a big fan of any company that can so nicely reproduce a scale AFV at such a reasonable price. As a German AFV nut, I completely endorse this kit to my fellow nuts or to anyone who didn't have the Deutsche Marks to buy the Gunze kit. Now you have no excuse to keep from building this interesting version of the Wehrmacht's venerable Panzer III!

—Tom Jett

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Wespe Side Story

We dance to
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Tamiya Wespe SPG



Wespie, I just met a girl named Wespie. Wow! What a wild ride. I'm just sitting around cooling my heels after the StuG and WHAM! Here comes the Wespe. It's all new, it's wacky, it's koo-koo! It's quite a tomato. It's also Tamiya's 200th armor release. Cause for celebration? Yawohl!

Boring background stuff

Wespe. Pronounce it like this: Vasp, or Vaspa. Don't pronounce it like this: Ves-pa. People will think you're talking about a scooter.

The Wespe was a self-propelled gun based on the chassis of the Panzer II. Notice I said "based." It's not actually a conversion, like some of the other German SPG's. It was a new design using the existing components of the Panzer II. This was being phased out in 1942, so there were tons of parts left over. It began production in early 1943 and was manufactured by the folks at FAMO, renowned for their big shiny half-tracks.

The vehicle itself differs from the Panzer II by being somewhat longer and by having its engine located amidships to make room for the gun. The weapon was the 10.5 cm L/28 "Leichte" howitzer. This was the standard towed light howitzer of the Wehrmacht at the time, and it was a rugged and reliable weapon. The version used in the Wespe was actually an improved type, the 10.5 cm le FH18 (Mündungsbremse). This gun was modified slightly to take a more powerful charge. The most obvious difference over earlier guns is the muzzle brake.

Exciting building stuff

Have I got a weekend project for you! Construction of this kit starts right out of the gate. The suspension and other gear go really fast. The hull sides each get five leaf springs and these parts are very crisp, as is just about everything in the kit. Beware the springs: there are two different types. (There's two of these leftover—why?) The parts come off the sprues really well, too. One thing I particularly like are the roadwheels. The parting lines for their sprue end up going right across the corner of the tires. What's this mean to you? No flash or seams. That's the way, Uhuh, Uhuh—I like it.

The hull is detailed all over, and the only thing you don't get is the driver's compartment. Building the interior is super easy. The lower part of the fighting compartment is over-and-done-with in minutes. You have the option of leaving the bottom ammo doors open, and several 10.5 cm rounds are provided in plastic. Thank you.

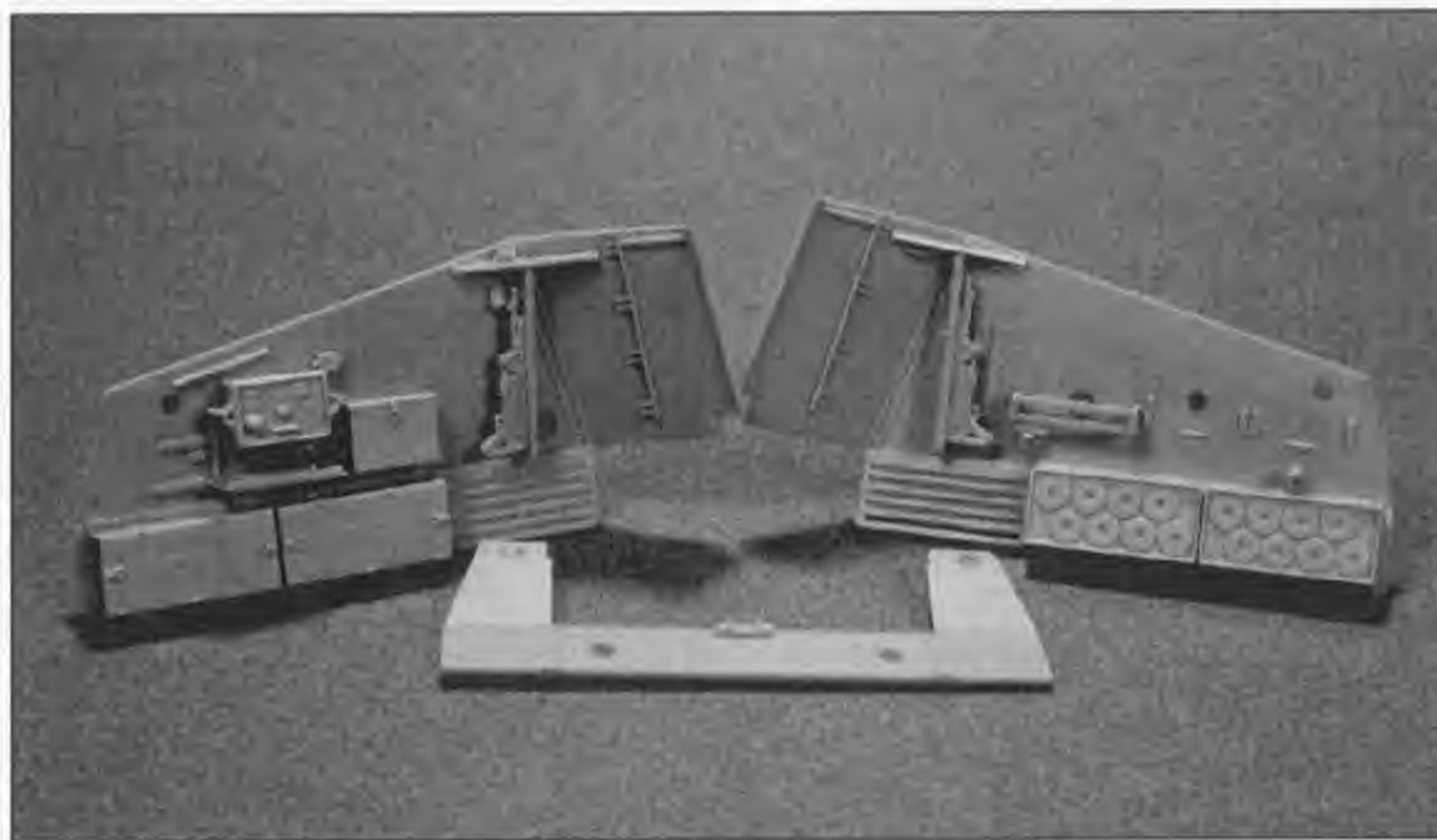
These incidentally, are the same rounds used in the StuH 42, and some are found in Tamiya's turned brass round set for the StuG III.

This area of the model is expertly detailed, right down to its heater door (thoughtfully left open) and access sub-panel. You have to paint here before proceeding (this is somewhat the story of this model), so you'll have to decide about those doors—boy, they fit perfect too. Watch out for parts A22/B32. This is the

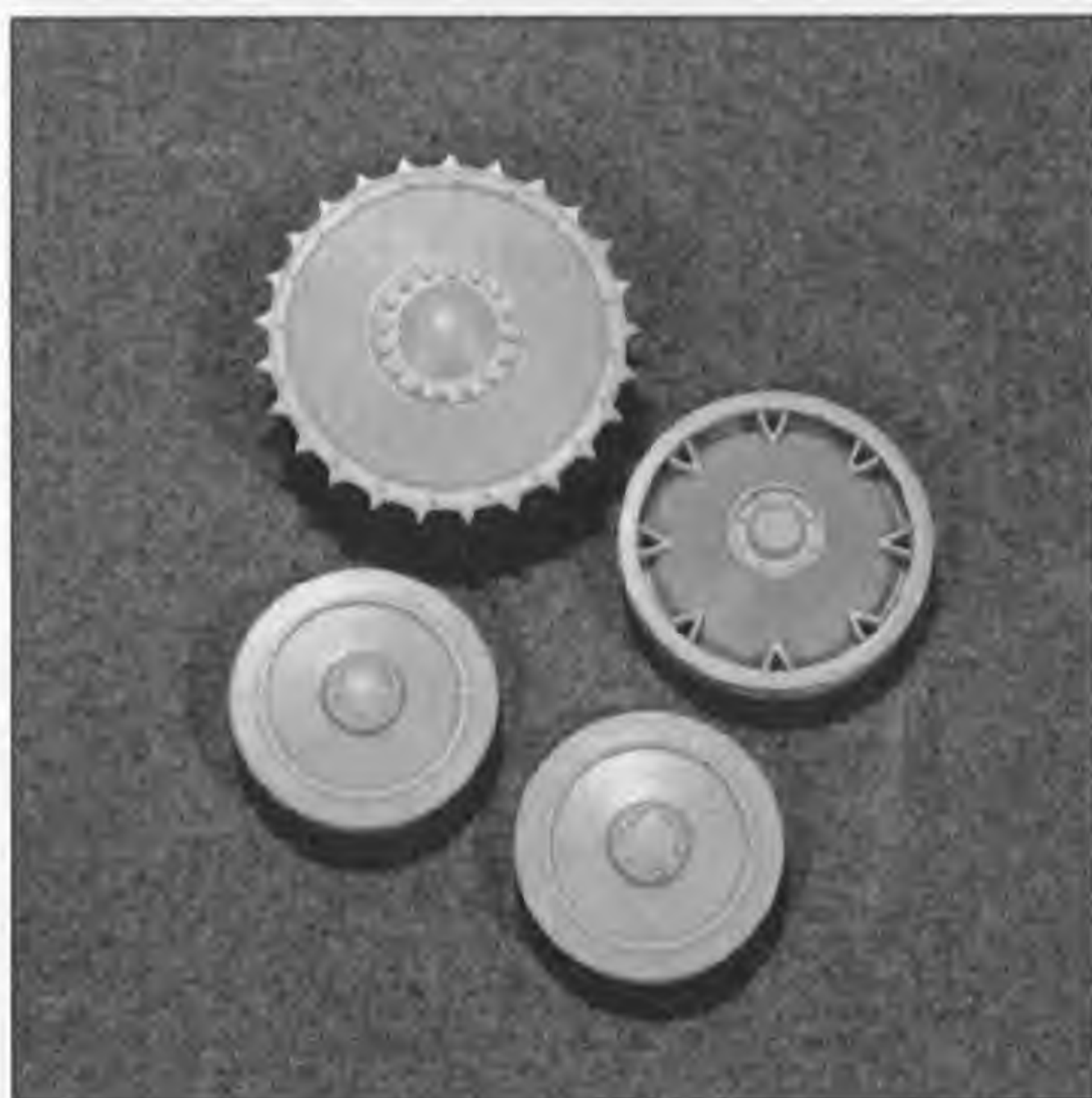
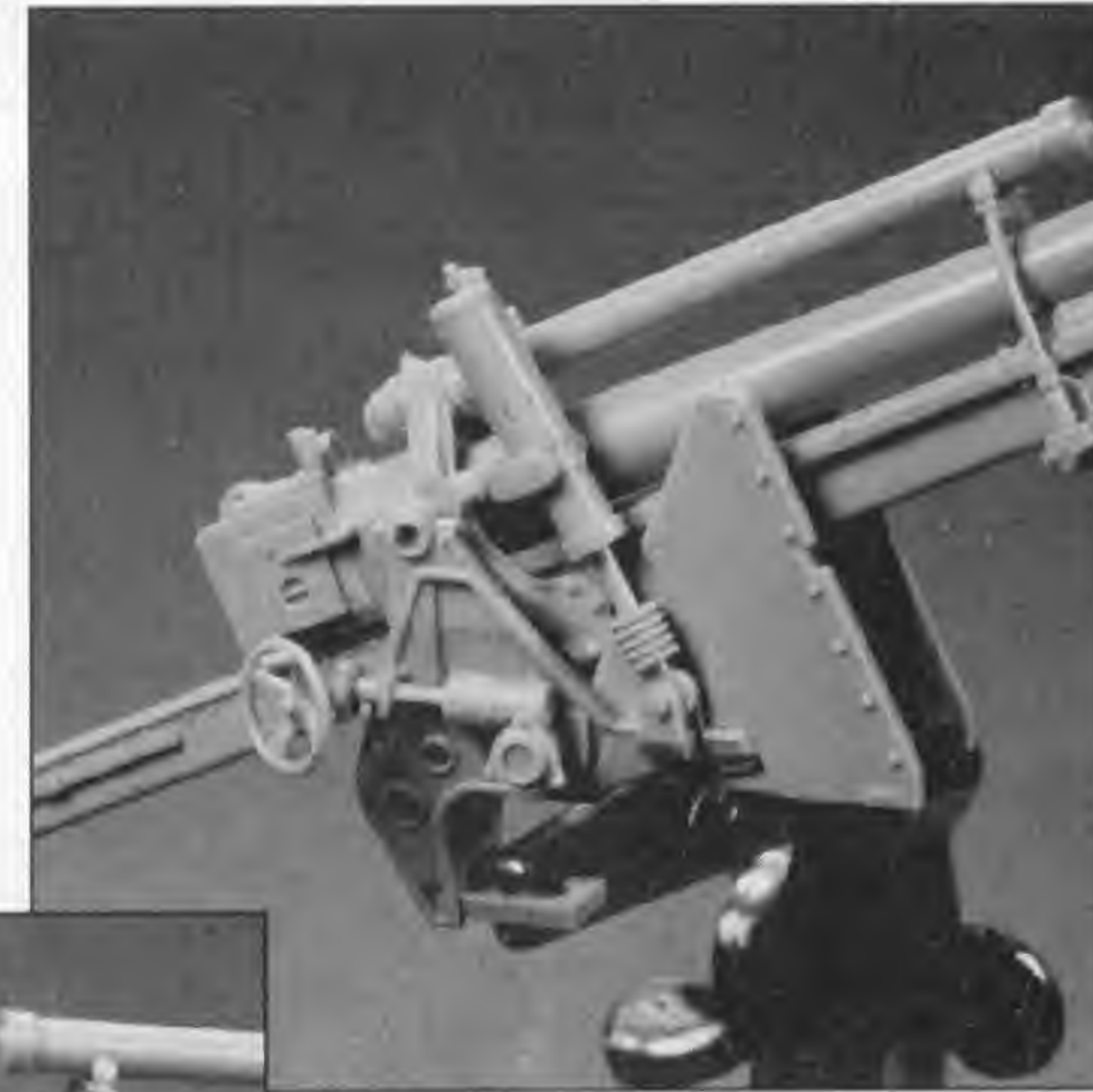
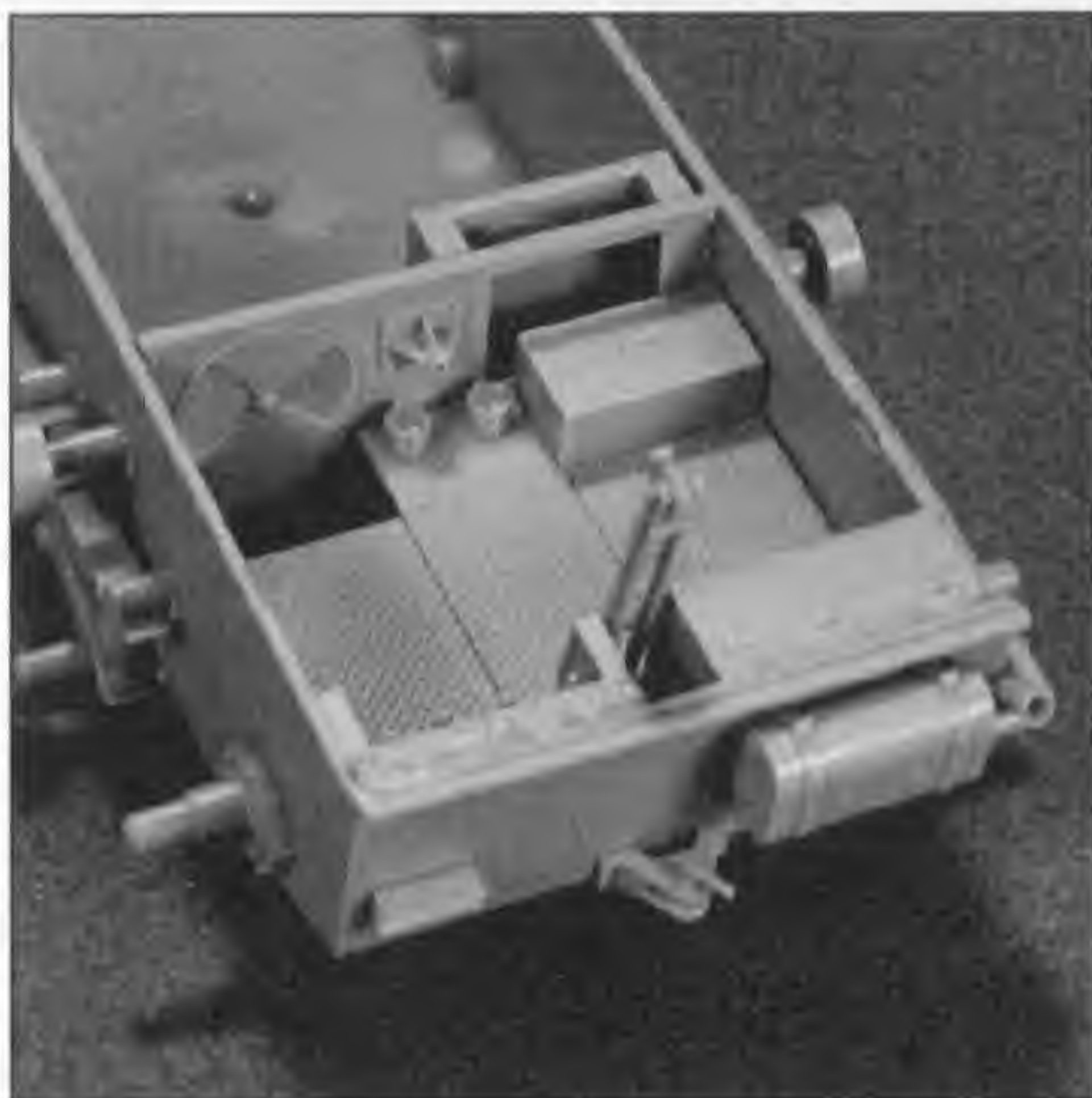
gun's travel lock and it's very delicate. I broke mine off 478 times during construction.

I hit the interior panels next. These get some bracing, ammo bins for the 10.5 cm charges (also found in the StuG ammo set), a box and the radio. These ammo bins have separate lids as well. At first I thought the face of the bin had a hokey molded-on look, but then I realized that the bins were actually hollow with a face plate that the charges slipped into. The rim on the back of the charge keeps it from slipping into the bin.





More or less pretty self-explanatory stuff. At left are various views of the interior under construction. The shot directly at left shows the hull panels prior to painting. Below are views of the gun, wheels and upper hull.



Kleenex for this model). But seriously folks, it really is something. The fidelity of all the details is extremely fine. This is as good as good gets. Among my favorite details is the large actuating tube of the right side of the gun. It remains workable without looking toy-like. Although I didn't manage to get a photo of it, there is even a sub-miniature serial number embossed into the face of the breech. The numbers are about 1/128th of an inch high! The whole idea of it makes me dizzy.

The sprue for the gun is essentially three-fourths complete. There's a gap in the right hand corner just big enough for wheels and/or trails. It makes me wonder: field piece version? The trunion is different, but other than that, it's arty city.

For now, I left the barrel of the gun out of its slide. This makes it easier to paint the inside of the gun mount. Leaving this off also allows you to add the big curved gun shield at this stage. (Part D25 for those keeping score at home)

The gun mount sort of hangs up the whole painting process. It must be installed in its mount before the upper and lower hull can be joined, and before the hull side shields go on. I would have preferred to button up at least the two hull halves first.

I painted and weathered both the gun and the interior now. I picked a later scheme of dark yellow for all. I sprayed everything black first, then added successive light coats of the dark yellow. This creates nice shadow effects that normally might be accomplished by using a wash, which would be next to impossible to apply down in there.

I hand-painted the smaller pieces like

the MP40's, the radio face and the gun laying equipment. Tamiya helps out quite a bit here by providing painting details on the various small parts. I hardly ever pay attention to these, but they came in very handy here. Color info on the inside of the Wespe is sparse.

The rest of the hull (and stuff)

There are just a few other weeny bits to add the front of the hull, like all the tools, spare track brackets and Bosch light. Two hatch panels are provided for the driver and the front visor door is complete with its own vision block.

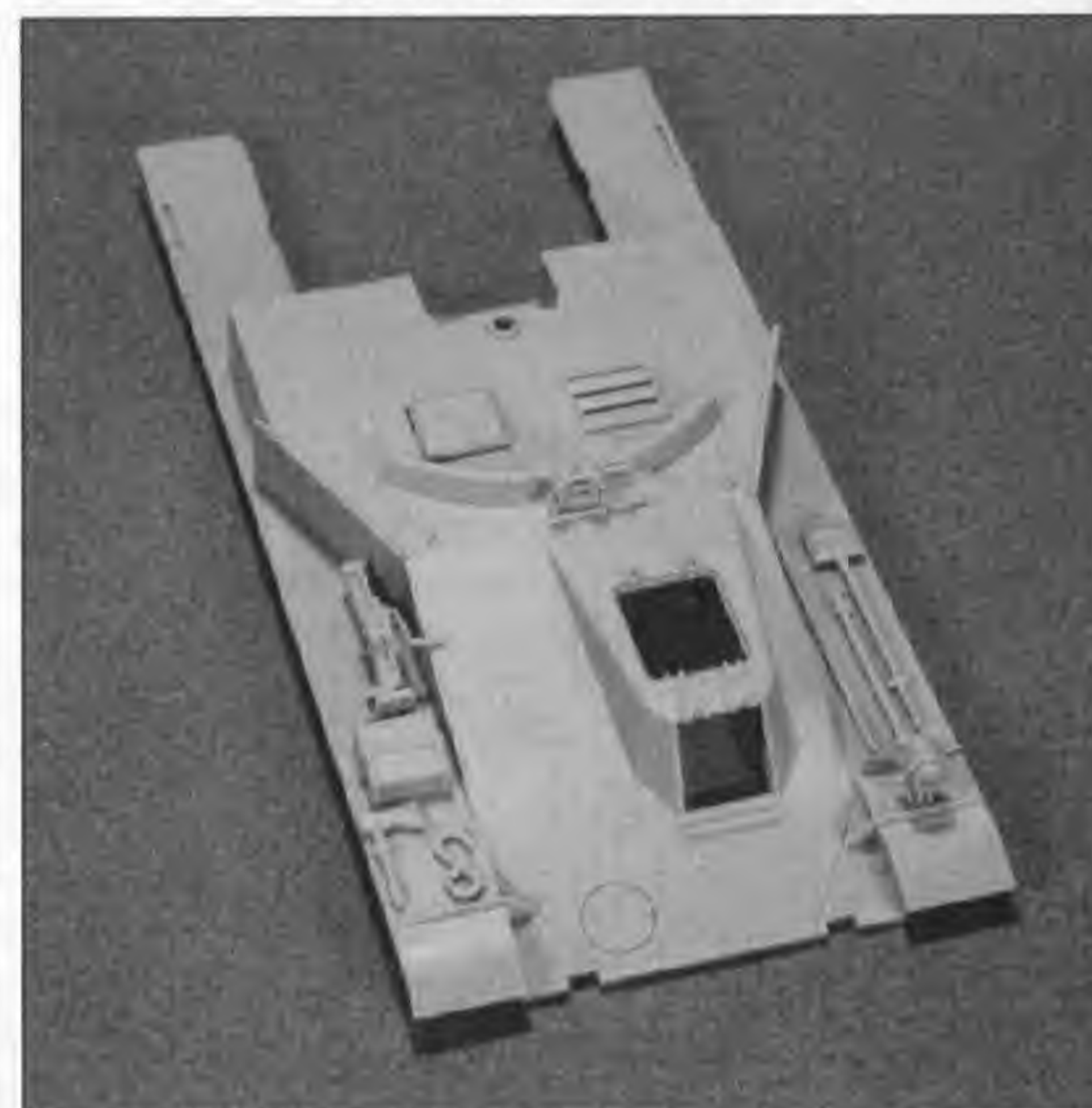
Once the interior paint was dry, I put all the gun and hull parts together. The gun will continue to

The insides of the side hull panels have some pretty nasty knock-out marks. Some are hidden by the gear, but most will need to be filled. I know these are a fact of life with plastic kits, but I almost would have rather had them on the outside of the panels. They might have been easier to deal with out there. Once I was all cried out, I filled them with putty and carried on.

The shields are beveled for scale effect and it's very convincing. There is a slight line about an eighth of an inch from the top of each panel where they begin to thicken up again. You may want to feather this down some. If the rear door is shown open for instance, it's fairly obvious.

The plot thickens: the gun gets painted

The weapon in our beloved Wespe is a thing of joy. I wept in light of its beauty (I used a lot of





All done! It looks very nice after it's all together. Below and to the right are close-ups of the driver's area. The hatches can be positioned open. Below: the two chilling looking crew members. I swear the heater vent was open...



swivel in all directions. Don't be tempted to freeze it in place, you'll need to move it to paint the curved interior shield.

There are two pesky lifting hooks that must be added to the interior prior to installing the hull sides. If you forgot to paint them before (like I did), you'll have a devil of a time getting them to match. Me no like this.

I shot the whole outside of the model dark yellow, stuffing some of that Kleenex down into the fighting compartment to mask it off. I followed with a pattern of dark green blotches. I used the instructions as a guide here, picking the Gross Deutschland vehicle from 1943. I like it because it has the biggest decals. I wanted my little kit to make a big statement.

I didn't add green to the gun for two reasons: first, I wanted it a solid color and second; I figured the swapping out of old and new weapons would leave a Wespe with a factory yellow barrel.

I glossed the areas getting the decals (or "deckles" as they say in Scotland). Tamiya's decals have large carrier areas that don't go away as nicely as others I've used. I also tried to trim them closer, but the sharp edges made the effect even worse. You may have better luck just leaving them alone. Several coats of MicroSol finally wrangled them down.

The sprocket, idler, roadwheels and tires were all painted separately and added before final weathering. This was accomplished with three or four light coats of Floquil dust. When all this was dry (two days), I gave it a very light exterior wash of black and burnt sienna oil paint. Drybrushing with light gray and tan was the final touch.

The gun distance rods for the back add an interesting dash of color. The rods are molded with ultra small ridges separating the white and red sections, making it a snap to paint.

I left the tracks off during this entire process. Vinyl tracks (the kit's are pretty nice) don't take light coats of paint very well. Oil washes sometimes affect them badly. Tamiya has designed its new tracks to take paint better, but there's a method. I gave mine several coats of a very dark metallic brown. I tried to match the color of the vinyl closely. When they were dry, I dry brushed them thoroughly with gun metal. If the effect is too much, a little pastel will dull them down.

Tune in again next week...

This kit was a riot to build. I got it fairly close to press time, so it was a straight out of the box build. I didn't see much else to do to the kit. A few tool

claps here and there and maybe additional feathering of the hull shield bevels. The tracks hold their own, too. There may be other detailing opportunities inside the fighting compartment if you come armed with the right references.

There is one conversion option too: the Alkett weapons carrier, which is essentially a Wespe minus its 105 howitzer.

The Wespe is the cheapest of all the new Tamiya kits at \$39 in the U.S. It's the smallest too, being about six and a half inches when complete. A diorama depicting a battery of Wespe's wouldn't be very big even with four or five kits.

I'm curious about future spin-offs. That mysterious missing section of sprue for the gun and those equally mysterious leftover springs...

I'll wait right here. ☹️

—Pat Stansell

MMiR RECCE

Tamiya German Self-Propelled Howitzer Wespe. Kit Number 35200. Kit graciously provided by Tamiya America. Suggested retail \$39.00.

References

Wespe. 105mm guns. Alkett Weapons Carrier & Captured Vehicles by Joachim Engelmann, Schiffer Publishing. A good, bargain priced book in the "in action" 11 x 8 1/2 format. Wherever Schiffer books are sold, or direct at Schiffer Publishing Ltd., 77 Lower Valley Road, Atglen, PA 19130.

Encyclopedia of German Tanks of World War Two by Peter Chamberlain and Hilary Doyle, Arms and Armor Press. A copy of this should be next to the Panzerfaust on the shelf of every German armor nut. It's got a brief but thorough description of the Wespe.

Also check any title that covers German SPG's. Each new one seems to turn up a different photo.

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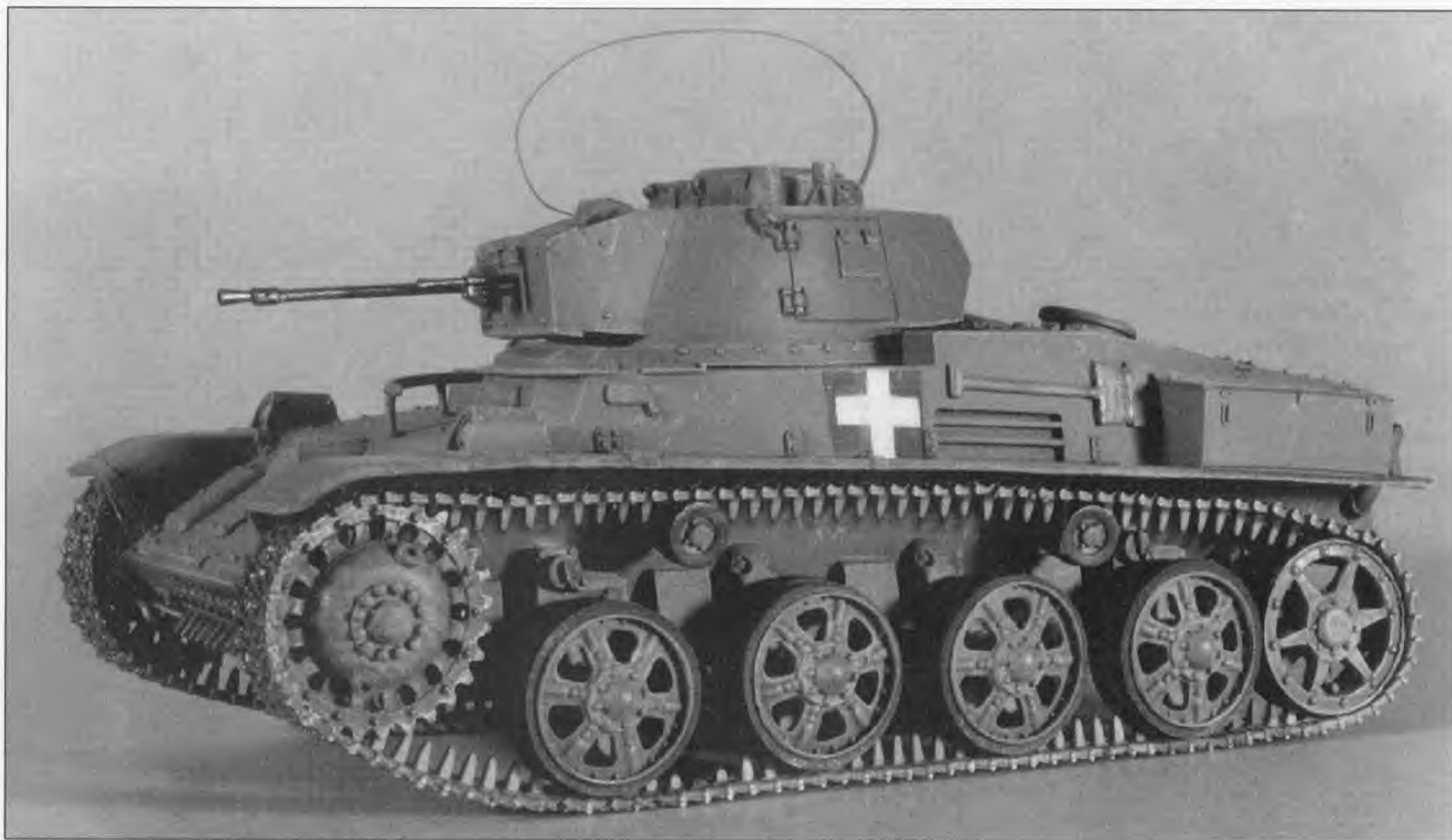


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TOTALLY TOLDI

MINI-ART STUDIO'S HUNGARIAN FAST TANK



The Hungarian Toldi light tank is the first vehicle offering from this Hong Kong resin manufacturer. A license-built Swedish Landsverk design and a contemporary and equivalent to the PzII, the Toldi was constructed in three versions (differing in armor and armament) from 1939 to 1943. This kit builds all three, a feat accomplished by including two different mantlets and turrets.

Casting ranges from excellent to mediocre. My choice of versions was decided by a miscast II/III mantlet, caused by mold misalignment. This would not be difficult to fix, but necessitates sanding off all the rivets on the mantlet in the cleanup, and replacing them with Grandt Line or equivalent parts. Since the only "in action" photo I could find (in Zaloga and Grandsen's *The Eastern Front*) showed the Toldi I, that made the choice even easier.

The casting on the major parts, the upper and lower hull and the turrets, is superlative, as good as any other resin maker and a lot better than most. For the price (from \$90 to \$135 (!); more on this later) the whole thing should be this good. It almost looks as though the big parts were done at one place and the little parts farmed out, maybe to the lowest bidder.

Construction

As with most resin kits, this one has some big chunks of excess, the dreaded "casting plugs," to be removed. Take care of this with your weapon of

choice, but keep the breathing of resin dust to a minimum. I hear it causes brain damage; it makes you buy more kits than you can possibly build.

If the big chunks were all the cleanup, this would be a snap, but there's more. Just about everything with a hole in it, like all the road wheels and tracks, idlers and drive sprockets, have flash in the holes. It was thin and easy to clean up, but there was a lot of it.

Taking a break in the suspension cleanup, I tried an upper and lower hull dry fit. With the front in place, the back end veered off at about a 25° angle. Hmmm. I flipped over the upper and discovered the problem. There is a mounting boss to fit an opening in the lower hull, and the front edge of this was about 3mm from the front of the hull on one side and about 1mm on the other. A quick pass with the Dremel on the short side and everything lined right up.

It looked to me at this point like there was plenty of room to fit the track with the hull assembled (a mistake, but not a major one), so I went ahead and put them together. There were a couple of little gaps that I puttied, but after checking these out with the suspension on, I don't think it was necessary.

Next I put the tow hooks on the lower rear hull, followed by the idler mounts. Careful—these need to end up at the same height. Mine did not, and the result was a "rocker," and I don't mean Mick Jagger.

There are four shock absorbers, and the plans are none too clear on how they go. This is the downside of building this weird, little known stuff. You

can't just reach for the Spielberger to find this kind of thing out. I put them trailing, as the photo shows; I don't see how they'd work any other way.

Now for the suspension and tracks. Take care assembling the idlers and drive sprockets. There are alignment pins, but it's still possible to get them out of whack. The outsides of the road wheels are really nice, with lots of detail, but the tires are a problem. Once again, it is mold misalignment. I sanded the tires so that the outside surface was flat all the way around and ended up with spots where I had very little tire at all. By carefully matching inner and outer wheels. Once the wheels were all on it was hardly noticeable.

The return roller mounts odd, to say the least. At first glance I thought the mounts had some excess flash on the ends. I was reaching for the emery board when I noticed that the 'excess' lined up with the road wheel mounts. Dry fitting revealed that the 'excess' (little thin "D" shaped protruberances) *were* the actual mounts. There was nowhere near enough surface here to glue these things and expect them to hold the rollers. Upon dry fitting the rollers, I found that if the pin on the outside roller is fully seated in the inside one, the track horns wouldn't fit in the slot. Using a section of track, I spread the top of each roller set enough to accommodate the track. The slight difference is invisible with the track on, but if you glued 'em all even, let the glue set and then discovered it... big-time bummer.

If you've built an Accurate Armour kit, these tracks will be familiar to you. Cast in resin in sections of 15 shoes, the detail is impressive. Each side takes six sections and four shoes. This will leave you a few extras for stowage. I put five sections together; this will get you across the top and all the way around the drive and idler sprockets. As with the AA tracks, use a hair dryer to bend them.

Like I said, there is little room to work under the fenders, so I employed an unconventional method for the tracks. First I put on the idlers. Then I fitted the five-length section of track to the drive sprockets, bending the front section around the sprockets and applying glue. Next I put the track over the idler (plenty of room on the back end) and slid the sprockets into place and glued 'em on. A touch of glue on the idlers, and now I had a straight line of track, from idler to drive sprocket. I placed the return rollers, gluing them not only to their wimpy mounts but also to the track. Lastly, I put on the road wheels; they'd have been in the way of the return rollers before. I heated the track and wrapped it around to the bottom, filled in the gap, and voila! It is a hell of a lot easier if you don't put the upper hull on first, but I still recommend you do the return rollers like this.

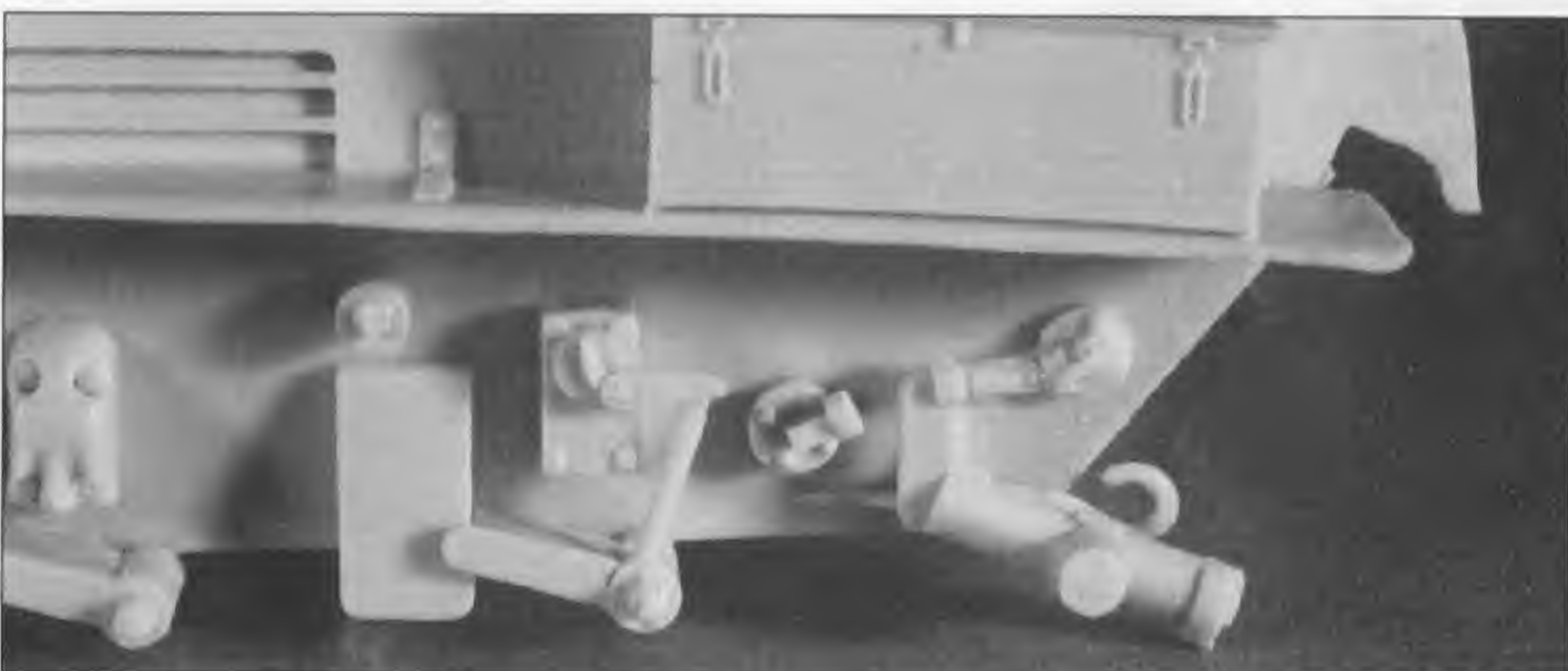
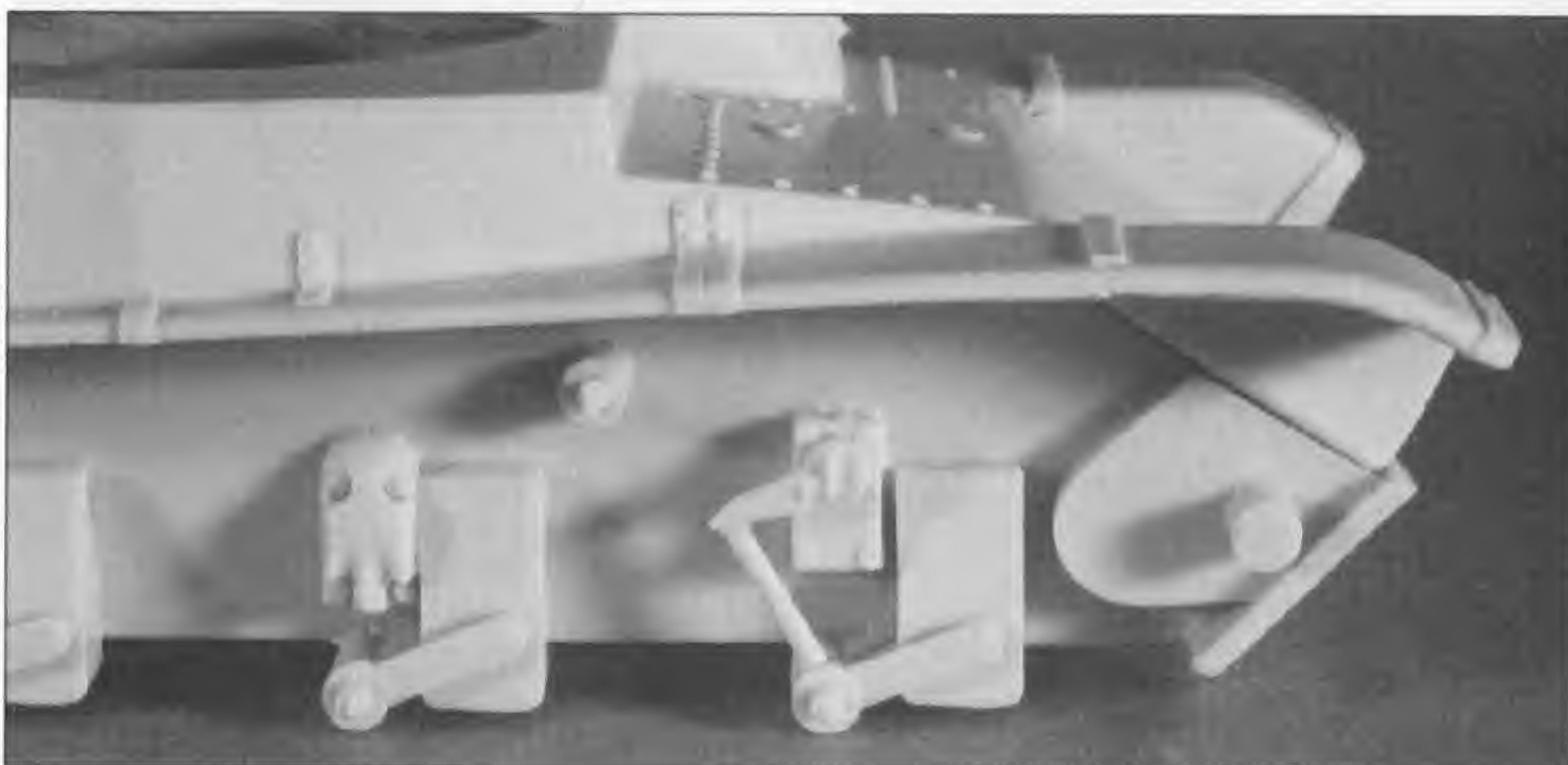
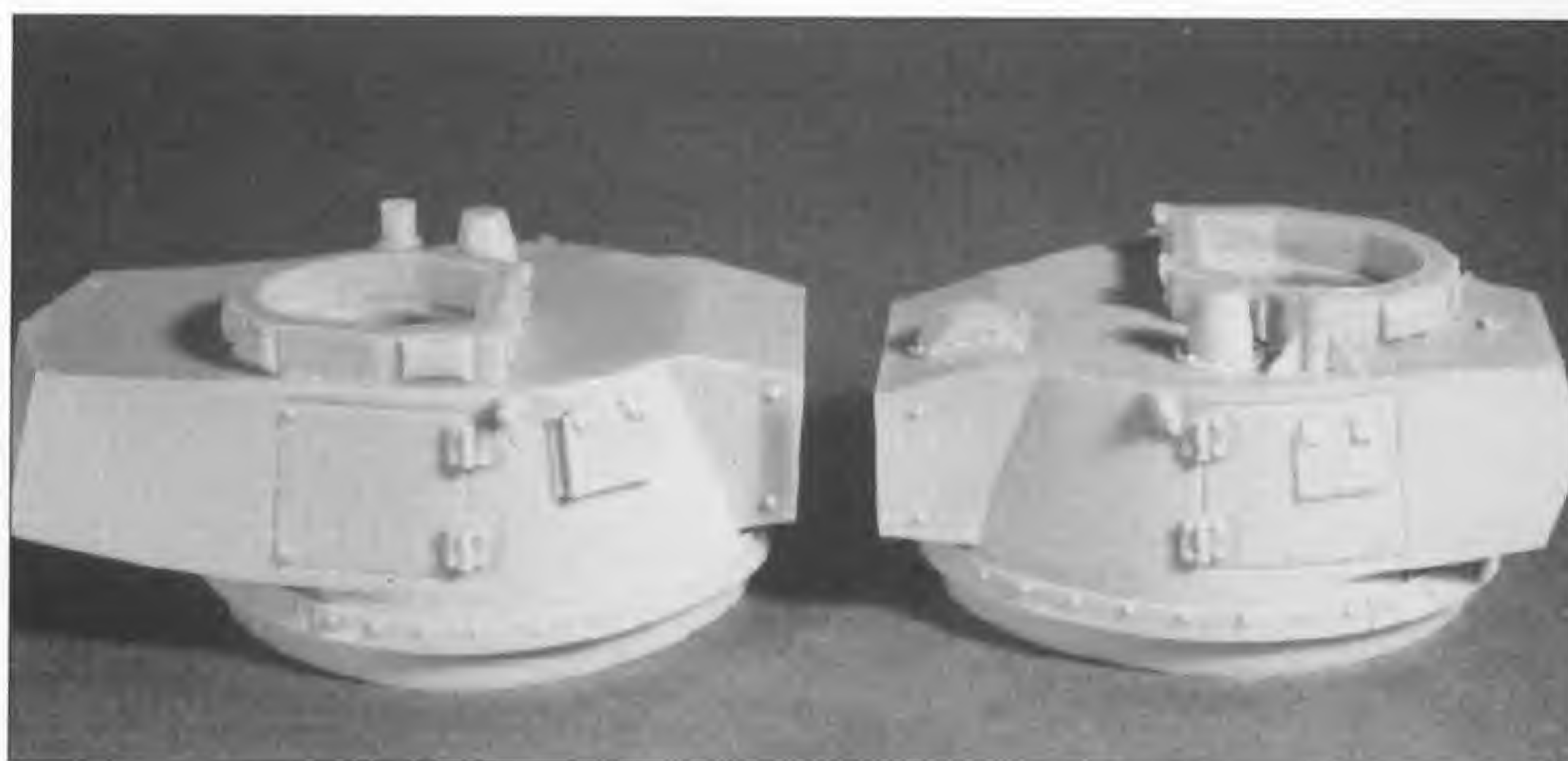
Next I placed the front tow hooks. I waited until the track was on so I wouldn't knock these off and lose 'em while rassing the track. Moving up onto the glacis, part 26, a louvered plate, went next to the right fender; for the later marks use the plain plate, number 27. Put on part 24, the semicircular ventilator in the center of the glacis. Don't put on number 25, the small hatch, first! This part has a mounting pin that, if used with what seems to be an appropriate hole, will make the ventilator not fit properly. Sand off the pin, and place part 25 to cover the holes left visible after 24 is on. Again for the later marks, a plate 27 goes on instead of 24/25.

Now put on part 26, which is the pivot pin for the driver's hatch. Seems odd, but the hatch pivoted horizontally, not vertically.

No matter how I placed the hatch, the hinge did not reach the pin with the hatch covering the opening. I extended the hinge about a millimeter with a bit of wire to close the gap. Part 22, a rest for the hatch (looks like a bit of ship's railing) was next, followed by the headlights.

This completes the hull except for the exhaust. This is very nicely cast; join the one pipe to the two mufflers to complete the assembly. Paint separately and set aside until after the final paint job.

The turret was a snap, as the Toldi I has only the hatch, mantlet, guns and antenna. The later versions require more parts and work; there's some serious cutting to make the IIa. The plans have the mantlets for the I and IIa transposed. The smaller gun goes to the I, as shown by the box art.



Top: to build all three versions, you need two turrets. The I takes the small one; the IIa the small one with stowage box and 40mm mantlet; the III the larger turret and 40mm mantlet. Middle: the shocks were placed trailing. The instructions are not very clear here, but this is the only way they'd both fit and work. Below the exhaust system. The lower pipe curling up over the muffler is the only part that has to be assembled. Paint and set aside until after the final paint job.



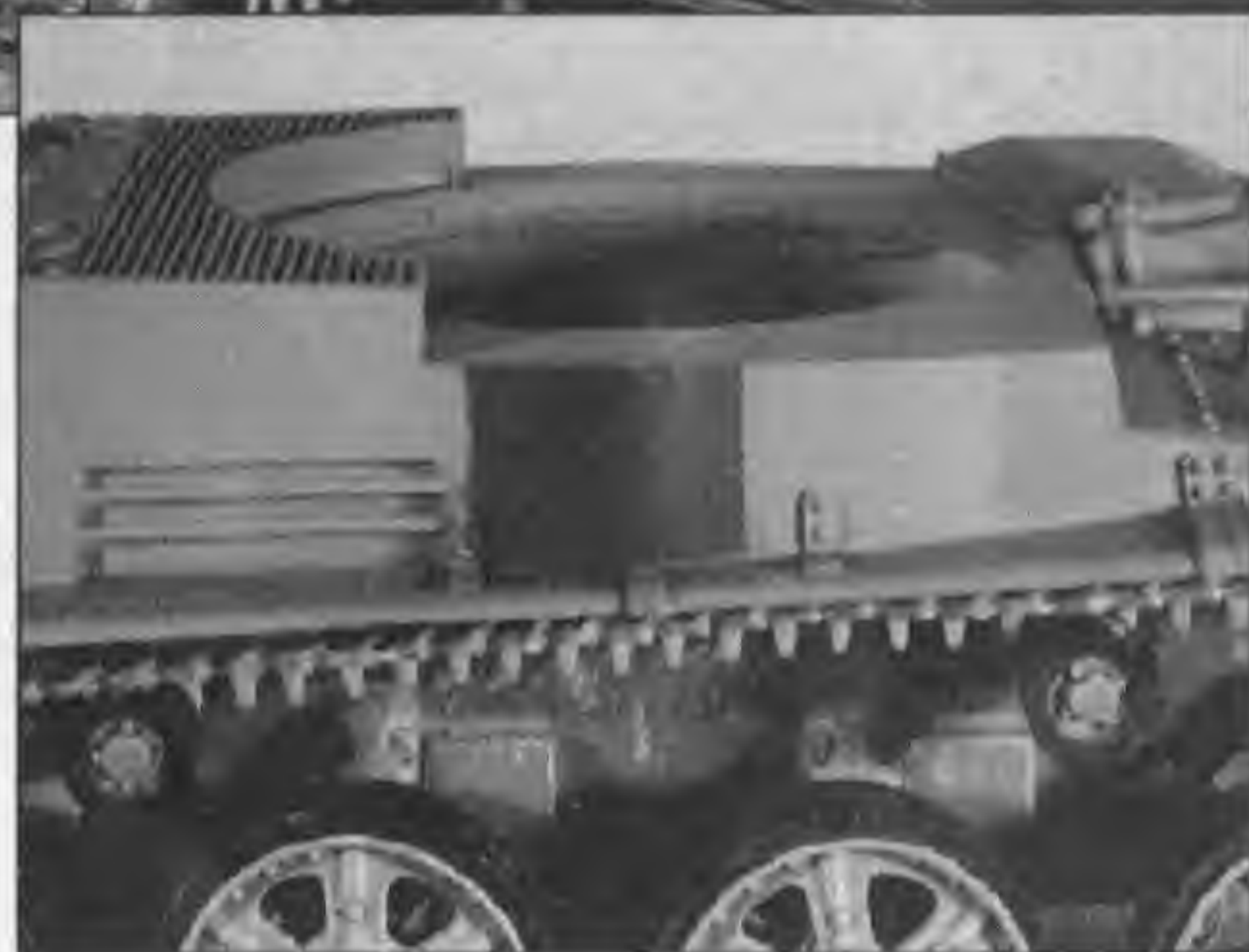
The back of my turret required some putty and sanding, as it wasn't quite flat. (If you build the IIa, the nice stowage box would cover this.) The mantlet also needed some sanding, suffering from mold misalignment again. My 20mm gun barrel was so out of alignment that it was unusable; there just wasn't enough material to sand. I cut off the flash suppresser and mated it to a Tamiya 20mm barrel, shortened to the proper length. I'd spent a lot of time gazing at the (few) reference photos, trying to pick out the antenna and mount, with no luck. Then I read a review of the Toldi by Steve Zaloga. His model had what he called "the old-fashioned band antenna." This was a revelation to me, as I'd never seen an antenna like this, but Mr. Zaloga has much



Above: the camouflage scheme unfortunately didn't show up at all in the black and white photos. Too bad, it looks really nice. Above left: one of the road wheels. Notice there's a lot more tire on one side than the other. Above right: the engine deck markings; a



square was masked off and sprayed black. Left below: the same but smaller was done on the hull sides. Far left & above: glacis detail. Make sure that the round ventilator goes on first; then sand off the mounting pin on the little square hatch below it, and place to cover the mounting holes. Right above the ventilator is the hatch rest, the thing that looks like ship's railing. Left: rear end, showing the exhaust system.



better references for this East European stuff than I do, so I followed his lead.

When I looked at the right side of the turret, I could see two mounts that made sense with this kind of antenna; I made mine from a brass fret runner.

All that is left now were paint and markings. Zaloga's *The Eastern Front* provided one color drawing and one photo, so I used these for a guide. The base coat was a mix of Pactra acrylic dark green and artillery olive, as the base color is described as "dark olive." Splashes of Pactra hull red, which seemed to match the drawing, and light earth, which matched the 'sand' best, were air-brushed on. Early war Toldi's had a hard edge camo scheme, but mine was of a 1944 version, when most were sprayed. The finished job was dry brushed with a lightened olive.

Hungarian markings changed in 1944 from the colorful early war green cross with white border and red triangles between the arms of the cross to a black square with white cross. I had two of these insignia from a 1/32 aircraft decal sheet, and used these on the front and rear of the hull. That left me with three to make: on the hull sides and a big one on the engine deck, the air recognition symbol. I masked off squares in the desired areas and sprayed with Pactra flat black. The big cross on the deck was made from Verlinden dry transfers. The little ones on the sides were German silhouette crosses, with the centers filled in with Pactra flat white. Then I

gave them all a coat of flat and dry brushed again.

Lastly I put on the exhaust system and a bit of stowage in the form of a shovel that went on the left side. I couldn't really make out any more stowage on the photo. On the front hull plate, I put a piece of wire between the tow hooks to hold the extra length of track I had left. I scooted this over as far as I could to the left so it would be in front of the driver. I figured that if these guys were going into an environment that teemed with T-34s, they'd want whatever they could get between their b.s.s.

Conclusion

The finished model measures a couple of scale inches too big in each dimension, but was plenty

close enough for me. I was quite pleased with it (I like that weird stuff!). I definitely didn't think it was the best resin kit I've ever built, but it was OK. A little more attention to the mold alignment would have put it up to the next level, with the French and Accurate Armour. This kit can get to be pricey, although I bought mine for \$90.

Ironsides will offer the same kit, possibly with ModelKasten tracks for even more money. I think the after market tracks are redundant given the fine quality of the kit tracks. Is it worth it? Well, how much do you like odd-ball Axis armor? ☺

—Joe Morgan

MMiR RECCE

Mini-Art Studio's Toldi. Kit number 3512. Price as purchased: \$90.00. The retail ranges up to \$135.00. Purchased from APC Hobbies, Box 122, Earlsyville, VA 22936. 804-973-2705.

References

- Crow, Duncan and Icks, Robert J., *Encyclopedia of Tanks*, Chartwell, Secaucus, NJ, 1975
- Zaloga, Steven and Grandsen, James, *The Eastern Front, Armour Camouflage and Markings, 1941 to 1945*, Arms and Armour, London, 1983.
- Get this book if you like the weird stuff. One of the few armor books to give any attention to Hungarian armor. Beware the hard cover version, the colors are off a bit.
- Zaloga, Steven, 'Mini Art Studios 1/35 Hungarian Toldi Light Tank,' Boresight, Vol. 3, No. 6. Address on page 58.

Sturmgeschütze Madness

Tamiya goes nuts with its own version of the early G



It used to be when you wanted to do a model of a German StuG III, all you had to work with was the old Tamiya kit. Horrible as it was, it still was the subject of many conversion and super detailing projects over the years.

That began to change about five years ago when Gunze Sangyo released brand new "high tech" kits of the StuG in plastic, white metal and photo-etched parts. Then about one year ago, DML began releasing their own versions, starting with the B and the F models, followed by the re-release of the Gunze kits under DML's Imperial Series label. Result: we are now knee-deep in StuG III kits!

This is not a problem as far as I'm concerned, and I got even more excited when I heard Tamiya was going to enter the fray. Their entry is a StuG III G early model.

Now before I continue, perhaps a little StuG Lore is in order. You see, there are so many to choose from now, it's not a bad idea to get to know the players a little better.

In real life (as opposed to scale life), the StuG was a stubby little bugger that started out as an infantry support weapon. During the course of the war, the infantry requested more bang for their StuG buck and as a result, the size of the gun and the interior arrangement changed. Variants ran from A to G and all the types were based on the Panzer III chassis.

The last vehicle to bear a passing resemblance to the original vehicle was the StuG F.

This was the first StuG equipped with the nasty 7.5 cm long barreled gun—an unfortunate necessity due to the fact that the StuG's role was gradually shifting from infantry support to anti-tank.

Early vehicles are immediately recognized by their upper hulls. The main structure does not extend over the fenders in these types. Armored boxes were welded on and it was these that protruded over the side fenders.

The StuG G did away with all that complex stuff, simplified the structure and also added a useful commander's cupola with all around vision blocks. The larger fighting compartment made it much easier to handle those long 7.5 cm rounds.

Other smaller details were added, such as: fixed fenders; an MG shield on the upper hull (there were

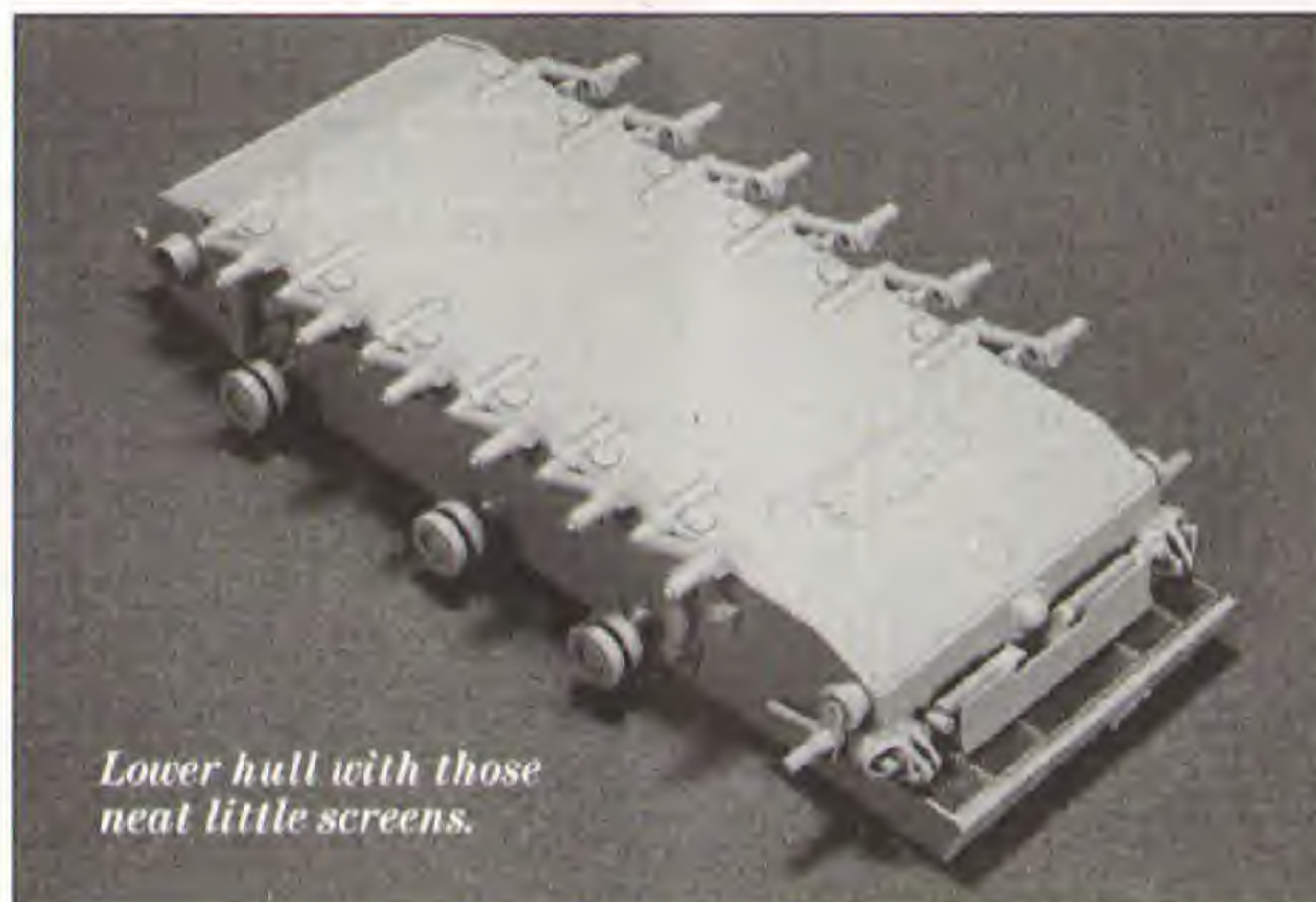
no self-defense weapons on earlier StuG's) and redesigned rear armor.

There was a fascinating version called the F/8 which actually saw the introduction of many of the features familiar to the G. This model still utilizes the earlier and smaller upper hull.

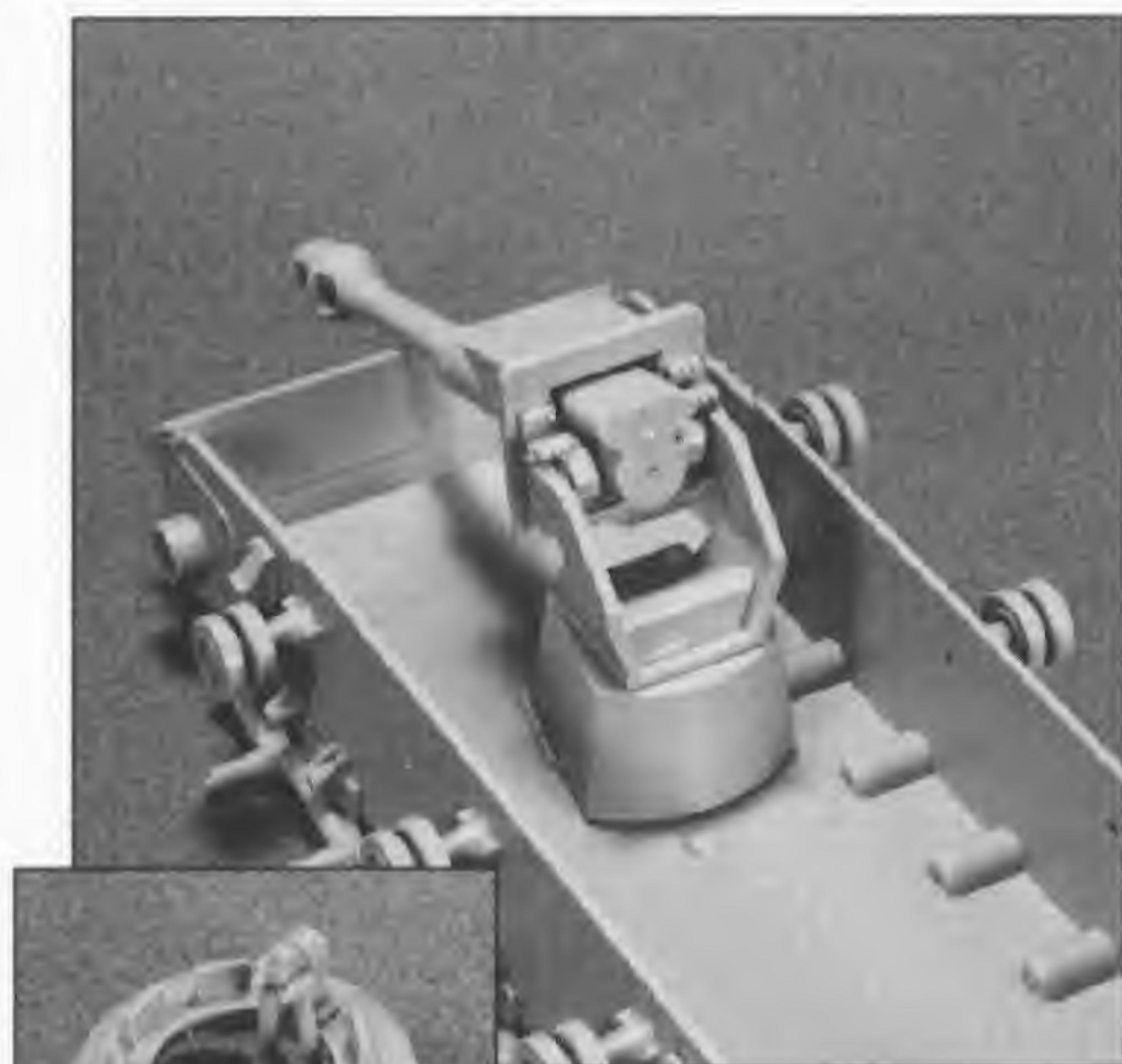
There are dozens of teeny details that distinguish early, mid and late models of the G, but the easiest thing to look for is the shape of the gun's mantlet. Late G's had a large cast "saukopf" mantlet, where early and mid-production types used the same triangular mantlet as the StuG F. Another late G feature was the bulbous bullet deflector that was added just in front of the commander's cupola. This feature can also be seen on some mid-production vehicles starting in late '43 and early '44. Other late features are all-steel return rollers, a gun travel lock and a remote controlled hull top machine gun.

A sub-version of both the F and the G was the Sturmhaubitze 42. This mounted the hefty 10.5 cm howitzer and it served right along side the 7.5 cm gunned versions.

Here's the rundown on what's out there so far: DML has the B, the C/D and the F (which has parts for the E). They have repackaged in their Imperial Series line, the F/8 (their own conversion of the F), and the ex-Gunze late G. The interesting thing about this new G is that even though one of the two old Gunze kits was an early G (with StūH 42 parts), DML picked the late G. The Tamiya kit is well and truly the early version with all of its distinguishing features. So there's no duplication (yet).



Lower hull with those neat little screens.



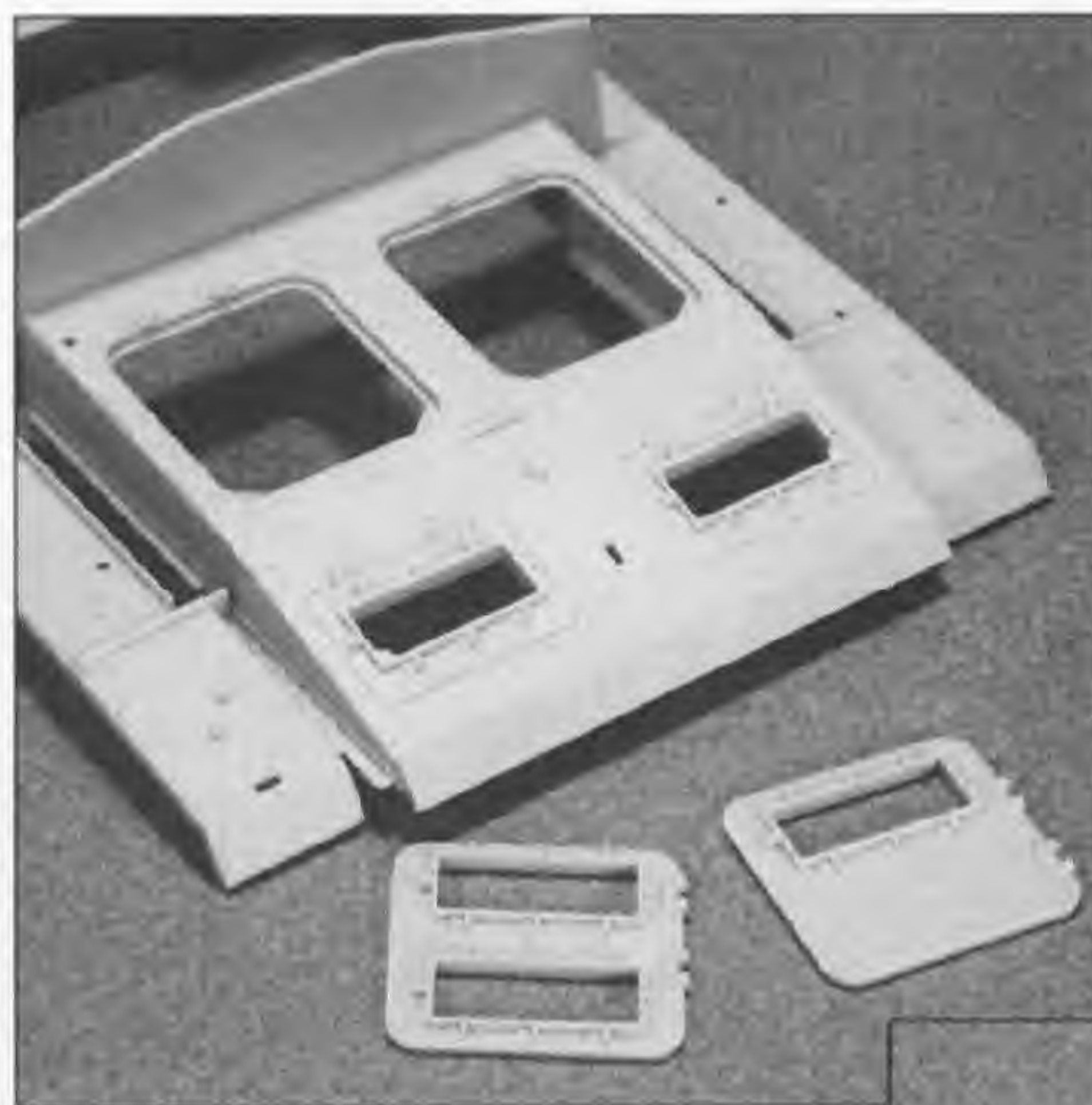
Tamiya also gives you the option of creating the Sturmhaubitze version by providing the larger barrel.

Chug-A-StuG

By now you're probably tired of all this background stuff and want to know about the kit. The first thing you'll notice is, like all the other new Tamiya kits, the StuG is covered with positively fetching tooling work everywhere you look. It is an all new kit, nothing of that old monster is in this box. The lower hull is especially worthy of note. All the proper plugs and fittings are crisply rendered. The shock absorber bases, the final drives and the drive sprockets all have delicate cast texture. The roadwheels even have mini weld marks around their inside rims. (We're getting so spoiled, aren't we?)

Oddly, the front tow points are separate pieces and this causes a pesky joint which cuts across the final drive placement point. These are added at the same stage as the torsion arms—watch out for these, too. There are three different types and I just lopped them all off the sprue without looking at the numbers. The instructions will steer you straight. The arms themselves have nice, deep locating points. This makes for a very snug and stable fit. No wobblys. Also worth watching out for are the rear towing points. Their positioning is a little confusing.

As is their habit, Tamiya has simultaneously released two accessory sets for this kit: photo-etched screens and turned brass rounds. I mention them here because before I went on to the top of the StuG, I installed the large screen on the big overhang on the rear deck. This is a superb piece of etching that is completely invisible once installed. I did take the opportunity to stare at it for a few hours before proceeding.



Also provided in the PE set are the two side vent screens, two tread strip things and sights for the hull MG.

I left off all the roadwheels, sprockets and idlers until painting. The roadwheels, by the way, should have some visible seam around their rim. The real thing was made in a mold, too.

Top 'o the StuG to you ma'am

Although I was inclined to add the upper hull at this stage, the gun must be installed in the hull before this can happen. It's very accurate and contains all the proper parts going up to the hull. No breech detail is present, but Tamiya stopped perfectly short of this area, perhaps providing an opportunity for some enterprising after-market company. The correct trunion is present too, but this mounts rather unceremoniously into a big plastic hunk that in turn gets mounted into the floor. Whatever works.

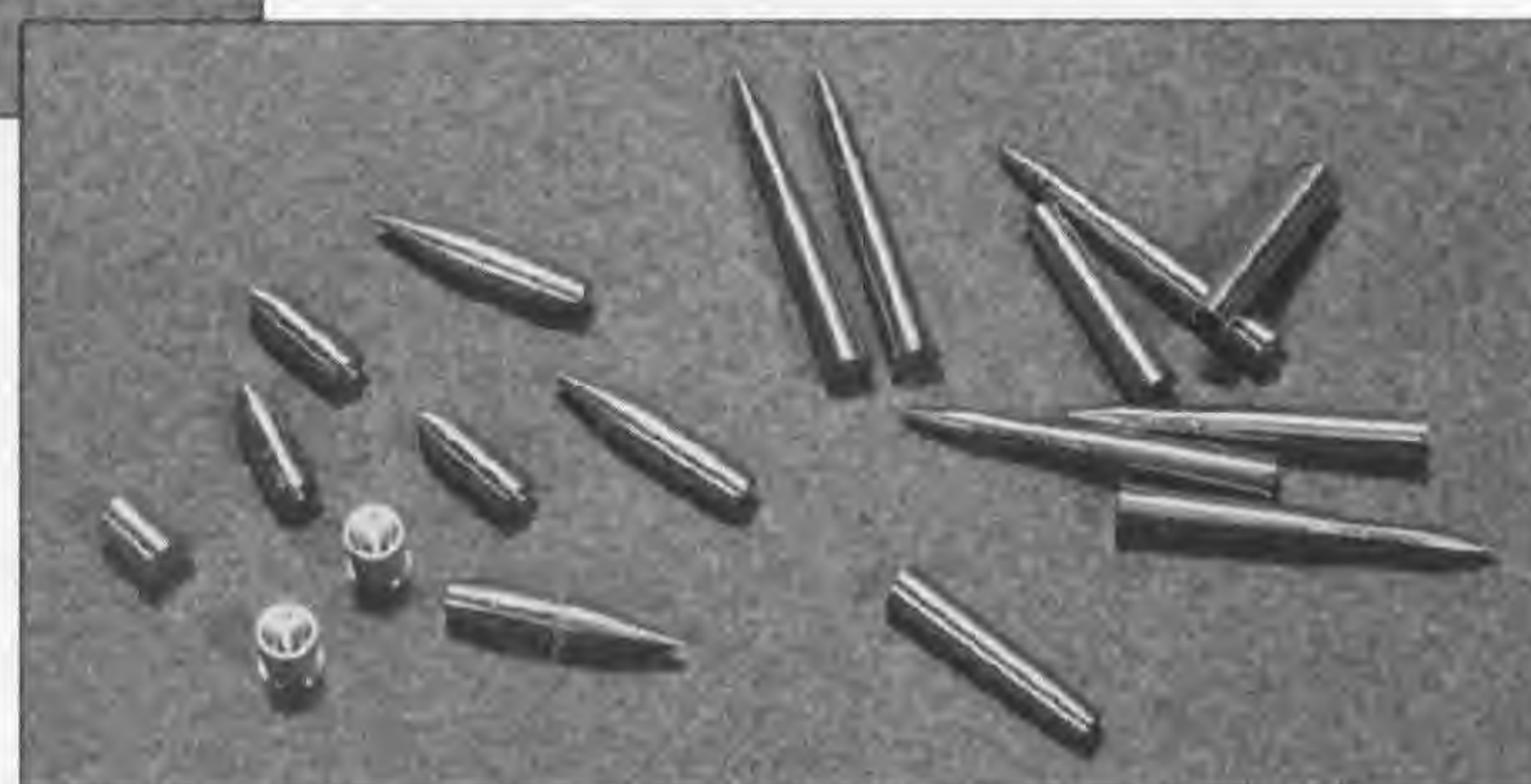
It all ends up looking quite nice, but a little more plastic would have been welcome. It's not a bad idea to paint the back end of the gun now. Getting to it later is tough.

Tamiya wisely gives us separate hatches for both the transmission access hatches and the main engine. The perfect gift for the interior detail afflicted individual.

The "Open Sponson Monster" struck again here, so get your plastic card ready. Annoying but not fatal. I closed up the hull (all over) and began adding all the other parts to complete the model. That's essentially all there is to assembling this kit—unless... Unless your motto is, like mine, "Add Detail or Die"

While adding all the hatches, tools, etc., I took the time to add a little extra sparkle. All the tools got photo-etched clasps. The wrap-around part of the tool fasteners is very accurate, so I only added the clasp part.

All new Tamiya jacks are free of molded on brackets, but I modified mine by



putting the wing nuts on the front face of the bracket instead of the top. This is the common StuG style. I swiped a bracket from the Tamiya Panzer IV tool set for the towing shackles. They just give you two to stack up. The tool I added the most detail to was the jack-block. Actually, I threw out the kit's and made a new one from bass wood, then detailed it with PE parts from On-the-Mark and Show Modelling.

Other hull madness was accomplished by making a new bracket for the Notek light from brass; adding new brass tow cable brackets; replacing the smoke launcher bases with On-the-Mark parts and fine wire; and detailing the spare track rack. This last item is provided as one piece in the kit (and everybody else's). It's really a single piece steel bar attached to the hull with movable hinges and wing nuts. I cut off the ends of the kit part and used small bits of sprue and ModelKasten wing nuts to create an accurate one.

There are a couple of knock-out marks in the loader's hatch and the MG shield, so while I was there I added the small latch that kept the hatch from knocking over the shield.

The commander's hatch and scissors periscope is really exceptional in the molding department. It's detailed out of the box, right down to the little sub-hatch for the periscope.

Indispensable during the entire process of building and detailing was the Model Graphix publication: *Achtung Panzer No. 5*. This book contains hundreds of line drawings which clearly illustrate the many small

The front end, notice the new Notek light mount. Below right: the back hull, with the detailed spare track holder.



This page: at the top you can see various photos of the model under construction; the weird gun mount is at the far left; the engine hatches are next and the the suspension components. The inset is the commander's hatch (it's upside down). Also at the top right is the contents of the turned brass ammo accessory set.



details on EVERY StuG variant. With all the StuG models out there, it's a very good investment for the German armor dweeb (like me).

Although I didn't use them on my model, Tamiya provides a pretty respectable set of side skirts for the StuG. All the correct upper and lower brackets are provided and the plates, though thick, are finely beveled to represent thinner armored plate.

The "finish" line

To finish my StuG I chose the scheme of a Sturmhaubitze operating in Italy, in 1944. This is one of the schemes suggested in the instructions and Tamiya provides decals for vehicle number 55.

This Sturmhaubitze has a little history behind it. After being knocked out in Italy (the damage wasn't too bad), it was sent to England for evaluation. There are several pictures of it at this stage, including one in the Model Graphix book. There are also pictures of what may be the very same vehicle, prior to its deployment, in the Spielberger book on the Sturmgeschütze. One of these photos apparently provided the inspiration for the box top painting, even though Tamiya's artist changed the gun.

I painted the StuG overall ordinance tan, but I added a fair amount of light gray to the color for a more beat-up faded look. The roadwheels were first painted dark gray, then masked with a drafting template. I love doing this, it turns a hour-long job into a 15 minute one. It looks so much better, too.

I gave the model some light over sprays to make it look even more faded, then glossed the areas for the markings, applied them with MicroSol and flat-coated when dry. All of the decals are from the kit.

Because of the above mentioned motto, I took the opportunity to add a set of the ModelKasten workable link-to-link tracks. The kit provided tracks are OK, but they couldn't possibly render that distinctive Panzer III style outside hollow loop in vinyl. MK track sets have been covered here before, so I won't bore you with too many of the details. [see the review of DML's Panzer III J in V2.2—Ed/I used one of the newer, solid center horn versions.

Even though each link needs to be cut off a small sprue, I did the unthinkable: I just twisted them off. (Shocking!) The attachment point is very small and the resulting blemish is invisible when the links are assembled. I also noticed that if you apply a small drop of superglue to the pins, rather than liquid glue as suggested, you can twist the pins back and forth until the glue freezes. Then the pin ends just pop off. This cuts assembly time in half.

I made two long runs of 92 each. This makes for a saggy track, which was the look I was after. I pinned the lengths to a piece of cardboard for painting and gave them several light coats of dark blackish-brown. Keep the coats light and you'll have no problems with them sticking. While they were still on the cardboard, I lightly dry brushed them with gunmetal.

One little detail note: for some reason StuG tracks, when extremely worn, have very shiny polished center horns. They must be hitting something in the idler. This is especially true of the open horned tracks.

To give the model a little color, I added the two types of 10.5 cm brass rounds provided in the Tamiya accessory set. You get 7.5 cm and 10.5 cm types. Both high explosive and armor piercing are supplied for the 10.5 cm. I set some of the brass casings on the back deck and set up the shells as if they were being loaded.

If you built your StuG as the 7.5 you can use the left over 10.5 cm high explosive rounds and casings with the new Tamiya Wespe. Value City man!

The verdict: it's a StuG

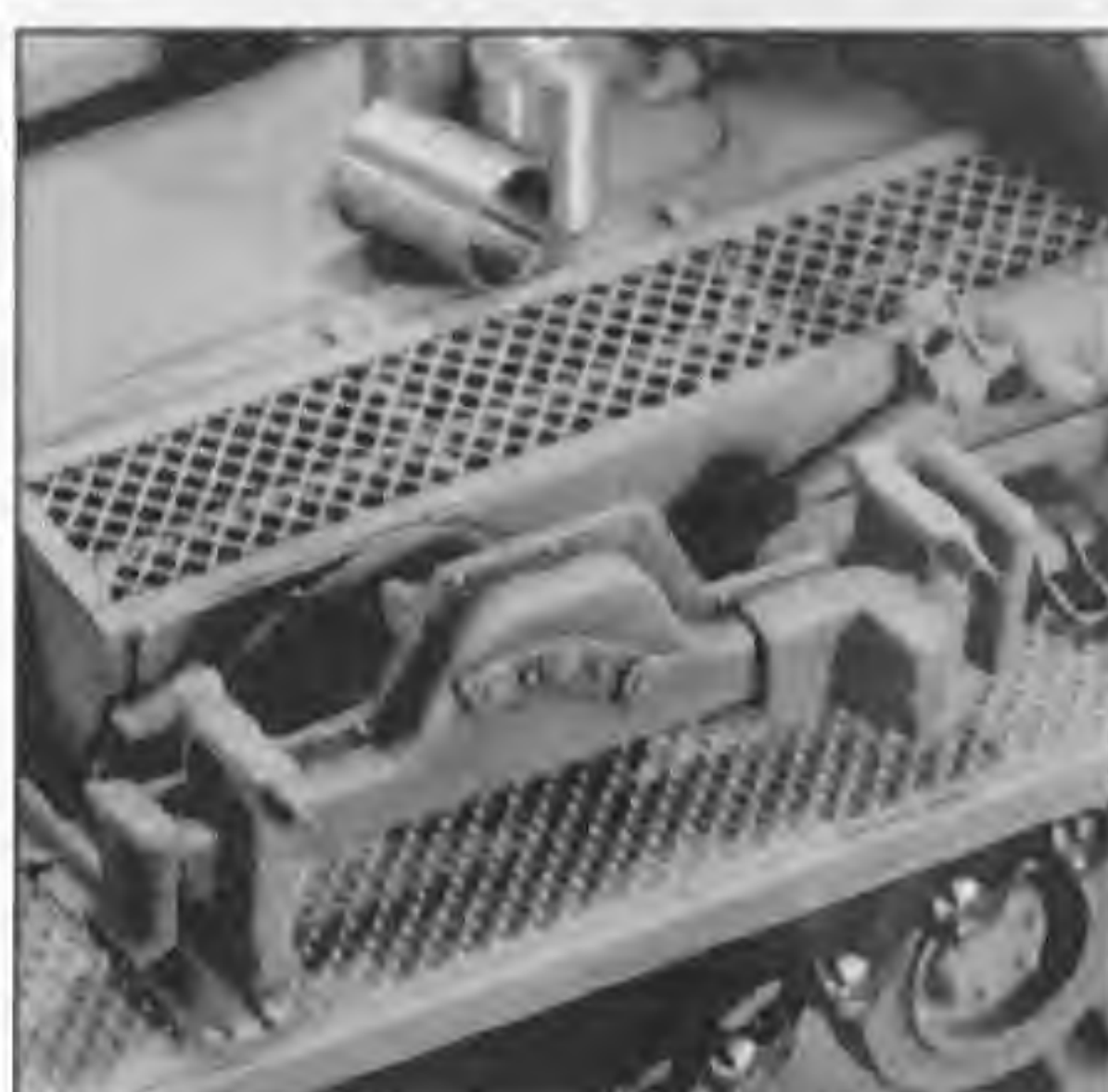
I enjoyed my StuG. This kit ends up being more complex than some of Tamiya's earlier new releases. As a result, there are some slightly awkward areas, like the front tow points and the rear overhang. Nothin' a little putty won't fix in a jiffy. It's funny how picky we have to be to find fault in today's kits, isn't it? Boy, I remember the days... (Sound of me being kicked).

On the big plus side is all that yummy detail. Tamiya has yet to drop the ball in this department.

The kit is slightly cheaper than earlier releases at \$46. I've noticed many shops are automatically pricing it in line with its nearest competitor, the DML late G, which is weighing in at \$39.95.

So start your collection now. I can't think of many armored vehicles that can be modeled for the entire length of their production run. What are you waiting for?

—Pat Stansell



Top right: the back end, showing off Tamiya's nicely executed exhaust shield. Above right: the hull roof. Nice stuff. Sequence at left, clockwise from above left: the left hand tool suite; the tow cable mounts and smoke launchers; the MG shield; the new jack block; and the slightly modified Tamiya jack.

MMiR RECCE

Tamiya Sturmgeschütz Ausf. G (early model). Kit number 35197. Suggested retail \$46.00.

Tamiya StuG III brass 7.5 cm/10.5 cm projectiles. Kit number 35198. Suggested retail \$14.50.

Tamiya StuG III photo-etched grill set. Kit number 35199. Suggested retail \$12.50.

Kits graciously provided by Tamiya America.

ModelKasten Panzer III/IV Late Model Type B. Kit number SK-22. Kit graciously provided by ModelKasten. Suggested retail \$43.95.

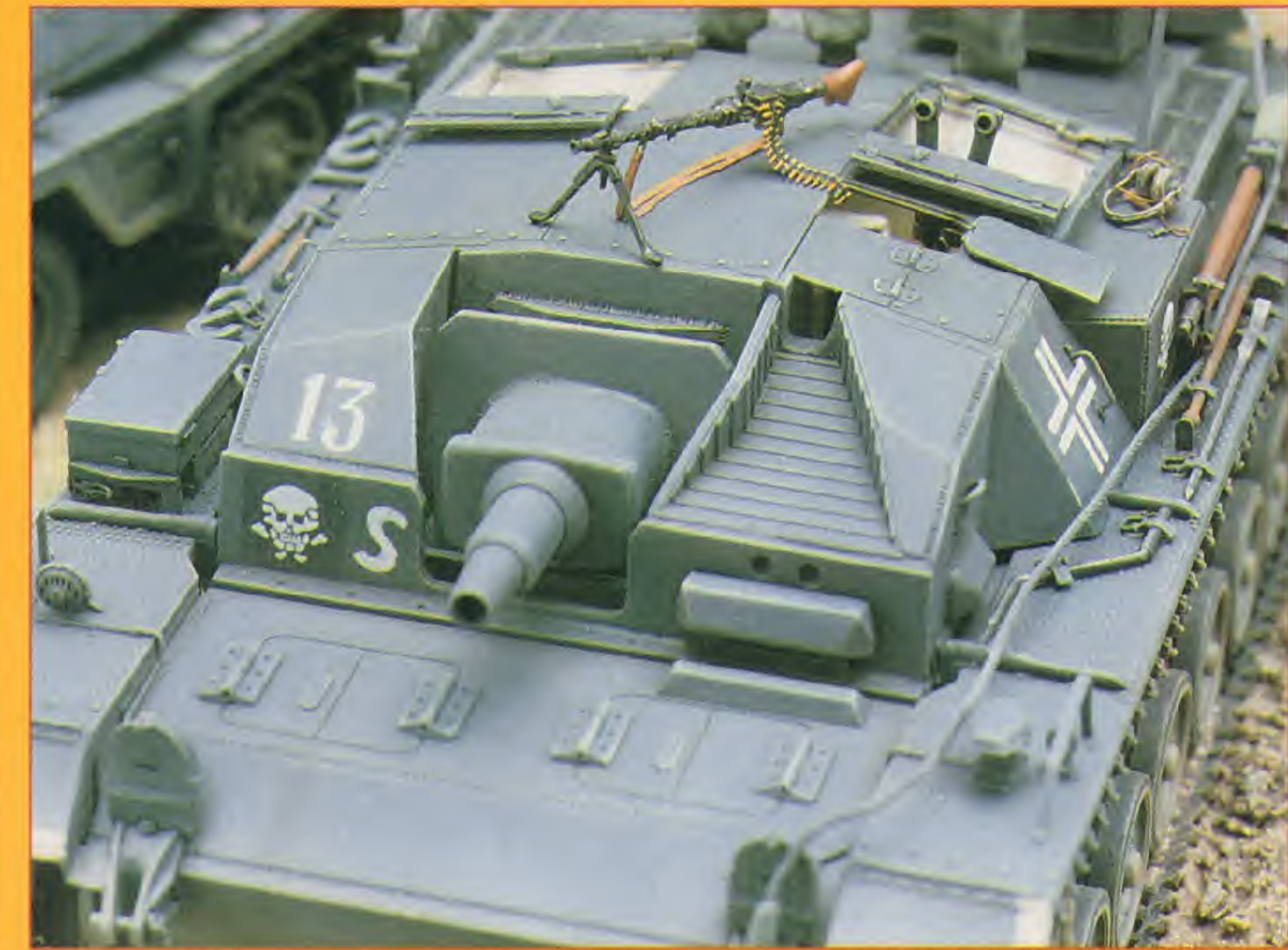
References

Achtung Panzer No. 5 Sturmgeschütz III, Stug. IV & SIG 33. Dai Nippon Kaiga, 1995

Yet another in a series of "details fests" from our Japanese buddies. It's expensive (\$45.95), but I'll bet it's the last book you need to buy on the StuG. Great coverage of the StuG IV and the Sturmpanzer IV too.

Sturmgeschütze III and Its Variants. by Walter J. Spielberger. Schiffer Publishing, 1993 (English version). You know the one. All around good stuff. Makes a superb companion to the above book. Contains the interesting photos of the Sturmhaubitze mentioned in the text. Available all over now for about \$40.

Summer in White Russia 1941



I've always liked the StuG III best of all the AFV's that saw service in the war. In particular, the short-barreled type recently released by Dragon/DML is my favorite—that ultra-low hull and stubby little barrel are quite appealing for some reason. So for my diorama subject I decided to depict such a vehicle being reloaded. The time and location I found appropriate was just after the start of the invasion, with elements of the 192nd Assault Battalion. The 192nd was one of the infantry units under command of General Von Bolk which took part in Operation Barbarossa in White Russia (modern day Byelorussia). The unit was eventually wiped out in



Kaluga to the west of Moscow during the frigid, final German attempt to capture Moscow.

The vehicle(s)

It was with great expectations and some serious worries that I took on the DML StuG B kit, but it proved to be a winner. It's an excellent model built straight out of the box, but 'StuG Fever' grew in me as I worked with it and I ultimately couldn't resist adding and tweaking stuff all over it. Finishing this diorama eventually took two months as a result!

There were only a few major gripes I had with the model. The instructions tell you to attach the binoculars through the small hatch, but this wasn't done until the StuG III Ausf. C. On the Ausf. B, the sight did not extend outside the vehicle. Also, it's not really a shortcoming, but if you bring the sloped back side of the fighting compartment up just short of the radio storage box, you can accent the StuG III's distinctive 'hilly' silhouette. The small parts like the jack, siren and the like were taken from Tamiya's Panzer IV On Vehicle accessory set, picking out the early-model items. Other than that, the Dragon/DML StuG III is an excellent kit, so I worked mostly on the interior which is very obvious through the many open hatches. The gun mount and breech parts are almost entirely from the Tamiya Stummel 251 halftrack kit. The driver's seat and transmission are nearly invisible, so I just stuck in some parts that looked close.

Since the StuG has no defensive weapon, I also added the superb MG34 from the Dragon/DML small arms set.

Tamiya's Sdkfz 250/3 'Greif' was converted to a Sdkfz 252 ammunition vehicle with resin parts from the German company, Peddinghaus. I picked these parts up a few years ago, and they are very hard to come by at present. The ammo trailer is Scale Model Accessory's Sd.Anh.32, a resin and white metal kit. I do believe this kit is still available in most parts of the world.

Some of the other details I added to all the kits are mentioned 'blow-by-blow' in the photo captions.

When the German attack on the Soviet Union was launched, platoons in German assault battalions were all equipped with SdKfz 252s, so I marked the assault gun and 252 the same. The skull marking featured on the box art of the StuG is that of the 192nd Assault Battalion. However, photos from the period show that the red skull on black field marking of the 192nd was changed to a white or light gray skull on black field shortly after fighting commenced. I used the skull markings from Tamiya's Decal Set B (#66526). Unfortunately it's hard to find decals that accurately match the numeral markings widely seen on vehicles of the period, but I found enough by scrounging through my parts box. Both vehicles were painted dark Panzer Gray.

The Russian BA20 is from Alan Hobby, handled by Dragon/DML. Before assembly, this kit doesn't look like it's going to amount to much, but when completed it holds its own quite nicely. I did do a few things to it. I sanded down the doors and bumpers quite a bit and the turret MG was replaced with ModelKasten's white metal Degtyarev (#M-1). The paint color is Gunze Sangyo's "Russian Green (1)."

Figures: The key to a good diorama

When I started work on this project, I hadn't built anything but individual vehicles for some time, so I took a few moments to think about dioramas before I got going. When you think of a diorama, you usually think of a base with vehicles posed on it, but is a base absolutely necessary?

If, for example, you wanted to build a scene of a tank commander and officer looking over a map on





Key to photos

- 1** Most of the interior was scratch-built with plastic stock. The non-slip floor is Accurate Armour's photo-etched part. The flat boxes behind the lower part of the gun mount are five-round ammo boxes.
- 2** Hand grenades are mounted on the engine room bulkhead for close encounters. The commander's seat was borrowed from the Tamiya King Tiger kit. Note the crew gear against the right side bulkhead.
- 3** I cut out the wall piece at the armored radio compartment and put in a Cornerstone Models Fu.5 transmitter. The receiver is attached to the back wall of the fighting compartment. I added 1mm plastic stock around the sighting port at the front of the fighting compartment to replicate the armor protection there (it's 50mm on the actual vehicle).
- 4** The breech of the gun. The mount was borrowed from the Tamiya Stummel 251/9, although the base mount was scratch built. The sight was modified to the early type.
- 5** Since actual 251/9's used the left-over short-barreled guns after the StuG went to the long-barrel guns, the upper mount and trunion are of the same type.
- 6** The jack is the early-model one from the Tamiya Panzer IV parts set. The bracket also comes from that set, but I modified it into the StuG III type.
- 7** The recoil cylinder cover is rectangular in the kit; I added realism by using plastic stock and putty to make it convex in the middle. The towing mounts on the StuG III are a complex shape, angled in three directions at once, making them nearly impossible to replicate correctly in an injection kit. I referred to photos while modifying them with thin sheet brass.
- 8** I cut off the kit's mud flaps and made my own from thin plastic stock. The photo-etched hinge comes from Gunze's StuG III kit. The towing rope is 1mm diameter stainless steel wire; the tips come from Tamiya's Panzer IV. Show Modelling photo-etched parts were used to improve the headlight covers (set #070).
- 9** I increased the angle of the slope of the roof to boost the StuG's trademark 'hilly' appearance. The locks on Ausf. B crew hatches were at the front edge so I made those with plastic stock.
- 10** The StuG III Ausf. B completed, prior to painting. Dragon's kit has fine road wheels, but a StuG III nut like me just wasn't satisfied. I used Gunze's wheels and return rollers and even went so far as to enlarge the holes in the wheels. Okay, maybe I'm getting carried away, here, but you gotta do what makes you

happy! The spare road wheels are also Gunze parts. I pulled these off of a trashed kit I built ages ago. The 2-meter tapered antenna was done by soldering brass wire into a brass tube and then sanding down and feathering the gap.

- 11** The painted interior roof of the fighting compartment. Ammo boxes have been added to the right of the opening for the main gun (foreground in the photo). Note that the binoculars go through the commander's hatch, not the regular small hatch.
- 12** The painted gun breech assembly in place in the hull. The interior was painted a very dirty off-white color.
- 13** The SdKfz 252 ammo wagon before painting. The Peddinghaus parts include the entire upper half of the vehicle, but I only used the rear section. I filled and re-worked the large hatches at the back as well, so it ended up being almost as much work as a full-scratch effort. The fenders were of the squared-off type, so I did those with 0.5mm plastic stock. The treads are the ModelKasten SdKfz 250 set (#K-18).
- 14** The Sd.Anh.32 ammo trailer is the SMA item. I didn't use the metal lid parts in the kit, but rather used plastic stock to model it in the closed position.
- 15** The birch trees are a core of wound wire with a surface of modeling paste. The branches are Verlinden's dried flowers. The leaves were done by applying a spray adhesive and then sprinkling on green sponge powder.
- 16** I used heavy-stock plastic rods for the log bridge, heating them to bend them slightly and then roughing up the surface with the teeth of a fine modeling saw. The ends were filled with putty.
- 17** The Alan/DML BA20. It doesn't look like much in the box, but it really comes together. Here it is just prior to painting. If you like Russian armor, it's really worth giving it a try.
- 18** The figures after painting. I like to peg each figure's leg with a short piece of brass wire. This aids in painting and provides an attachment point for mounting to the base. The head of the half figure came from Tamiya's ammo supply set. The figure with the shell resting on his shoulder is a combination of DML and Tamiya parts. I modified the cap from it's original SS-type to the Army-type. The reaching figure is an Adler torso with a Hornet head. The lower body & legs were scratch-built with wire and epoxy putty. The 7.5cm L/24 shells are the resin parts that come from the Verlinden 251/9 detail set.

top of a Tiger, would you really need to have a base? In other words, a base can be seen just as something to add reality to an already-completed scene. And what forms the core of a scene, defining the action for the viewer? Figures, of course. There can be dioramas without figures, but I think those are in a special category and require a very high-level of skill to pull off.

My point is that figures are the most important thing in a diorama. Figures make the scene, and the scene makes the diorama!

I highly recommend a book called *Military Modelling Master Class*. It features the dioramas and other works of the American modeler Bill Horan—a true master who has won countless awards in competitions and other events. The book mostly features dioramas of 19th-century British soldiers and the U.S. Civil War. In addition to his stunning technique, the brilliant composition of his works strikes at the heart of good diorama building. I urge anyone interested in improving their diorama-building technique to take a thorough look at this book.

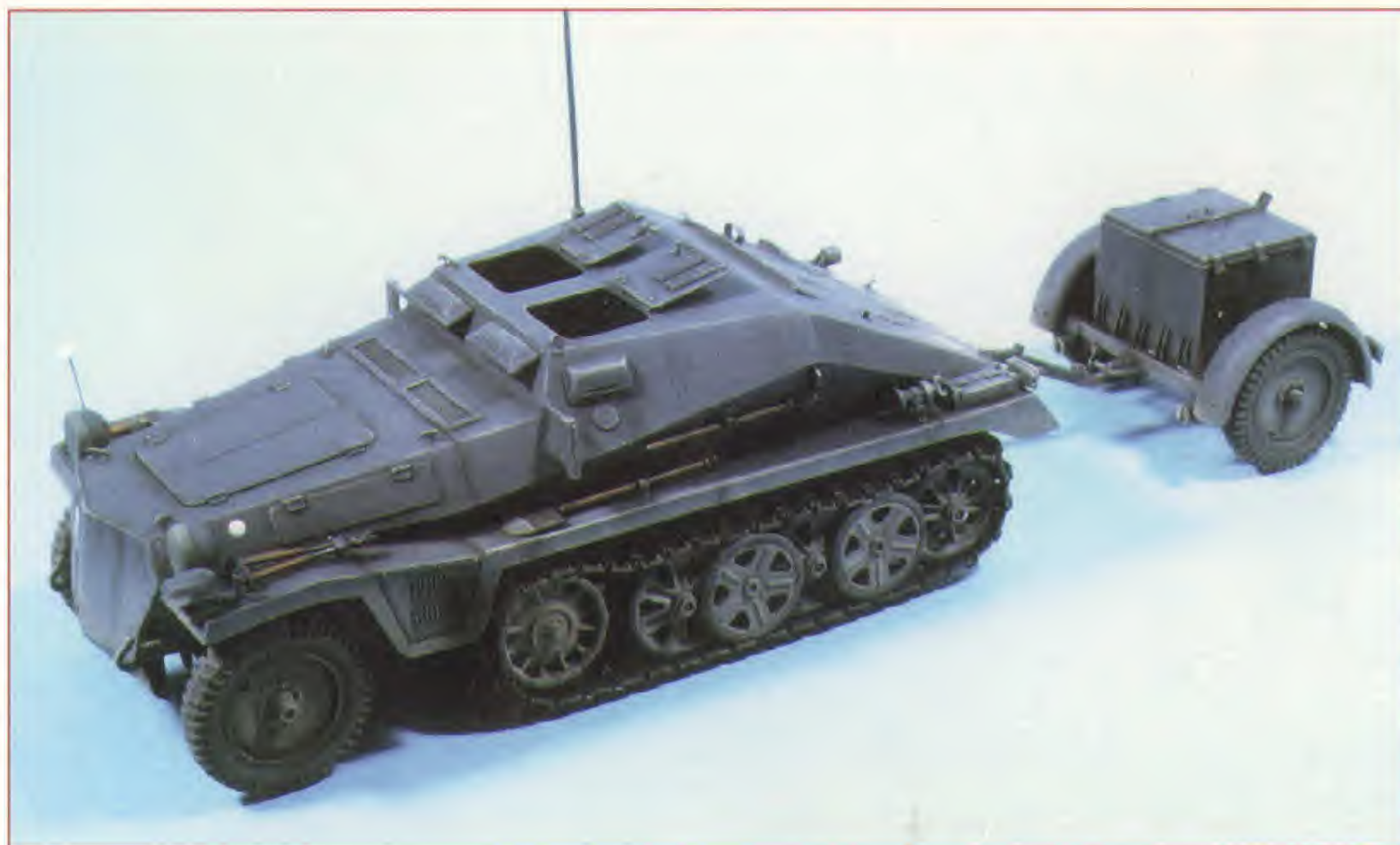
The five figures I made for this diorama are all assault soldiers who took part in Operation Barbarossa. Their uniforms are basically the same as those worn by panzer crews, but colored field gray, instead of black. The upper bodies are all tank crew figures from various manufacturers, but their lower bodies were scratch-built with epoxy putty using the technique outlined in the Bill Horan book that I mentioned above. The focus of the scene is the two figures who are handling the shell.

The upper half of the guy taking the shell is a new figure from the Japanese company Adler. I always marvel at the superb quality of their products [*these are not yet available in the states—Ed*]. I tried to pose and position the other three figures around the central two in ways meant to focus attention on the hand-off. The soldier with one foot on the box on the StuG as well as the guy half-way through the hatch, have heads from the Tamiya shell loading figure set. These are excellent figures with expressions as rich as the best resin-cast ones. The figure taking the shell has a head from the superb Hornet range.

The base and ground work

Attempting to portray White Russia in the summer, I decided to feature birch trees. These are a common tree found throughout this region. Being a Hokkaido native (Japan's northernmost island) myself, I'm personally quite familiar and fond of birch trees. I used the birches around my home as a reference as I worked on them. I pictured the setting as being on the edge of a small grove of trees, with some scattered grass and other foliage. I also added a log bridge of the type quite commonly seen used by the Germans in Russia to span small gaps. The base was built up with styrofoam pieces, which were then covered with a water-based Celluclay material. The ground was textured with different types of fine sand and gravel. Track marks and other indentations were added while the material was not yet fully cured. Static grass (the kind sold in model railroad shops) was added to certain areas as was small tufts of fine fiber to represent longer grass. Just for fun, I tossed in the little cat that comes with Tamiya's new reloading set. 🐱

—Masahiro Doi



MMIR RECCE

Summer in White Russia, June 1941 was composed of the following:

Dragon/DML 1/35 StuG III Ausf B. Kit Number 6008.

Tamiya 1/35 Sdkfz 250/3 Greif. Kit number 35113.

Peddinghaus 1/35 Sdkfz 252 Conversion kit. Out of production.

Dragon/Alan Hobby 1/35 BA20 Armored Car. Kit number 9003.

Scale Model Accessories 1/35 Sd.Anh.32 Ammo Trailer. Kit number SMAV113.

References

Barbarossa, Tanks Illustrated Number 16, Armor and Armor Press.

A great all around reference on the first summer of the Eastern Front. A good selection of both Russian and German vehicles, including StuGs and the BA20.

In case you were wondering:

Masahiro Doi is a 34-yr. old professional modeler in every sense of the word. He's never held any other job, and currently supports his family entirely by building kits and dioramas for Model Graphix magazine and Gunze Sangyo, as well as for private individuals who commission his work. His ability with figures, in particular, is outstanding and his scratch-builds are of commercial kit quality. He hopes to enter international competitions in the near future.

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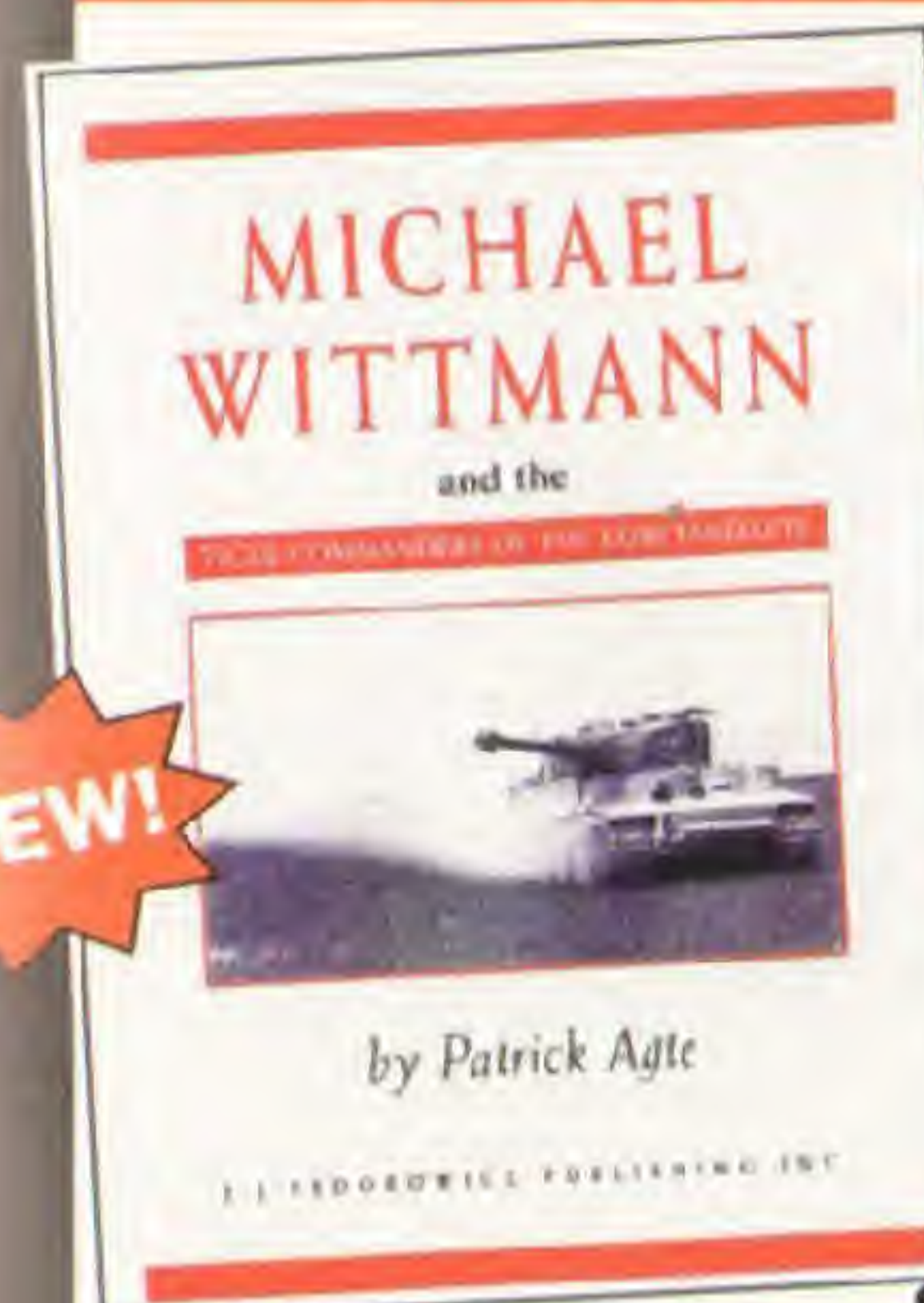
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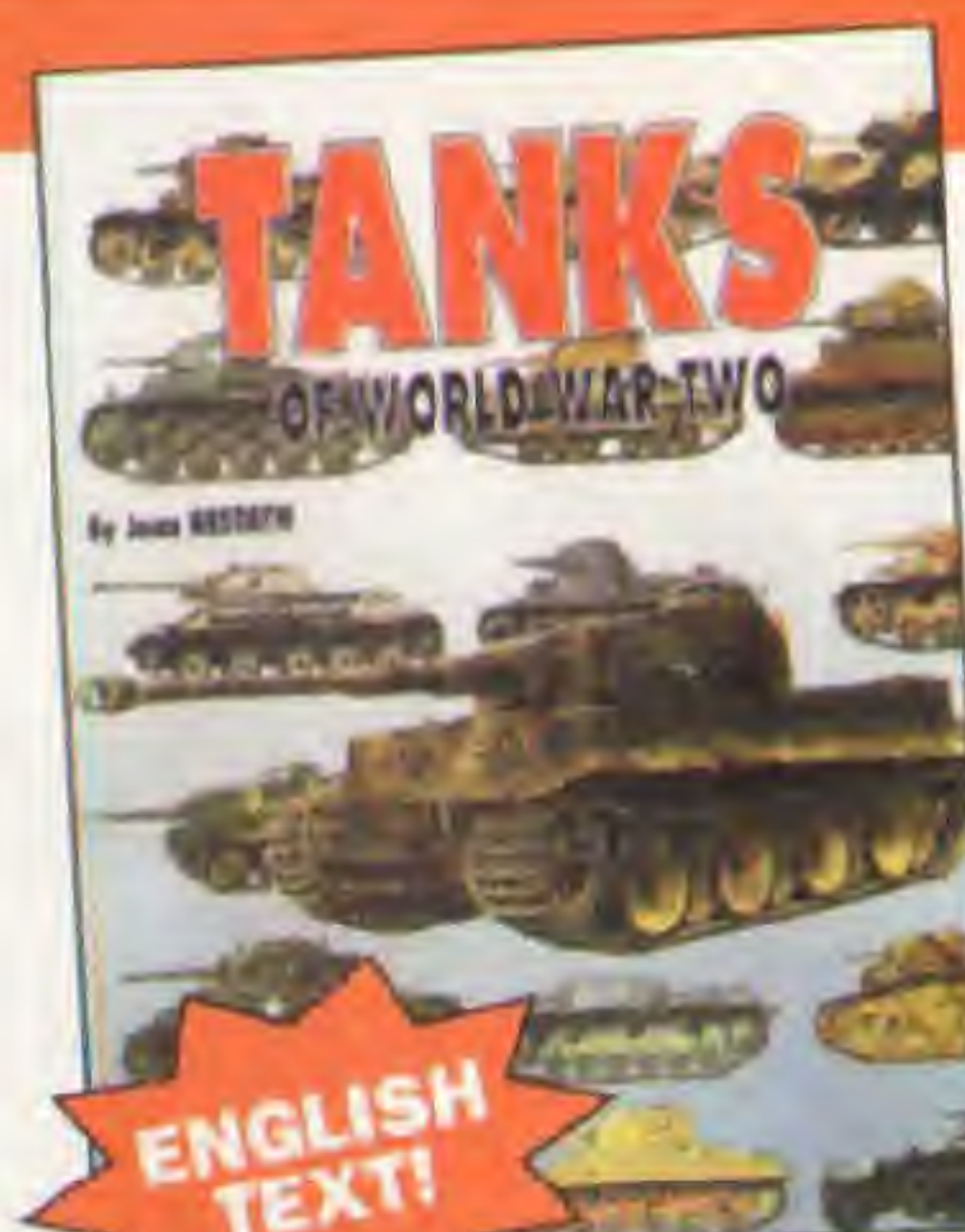
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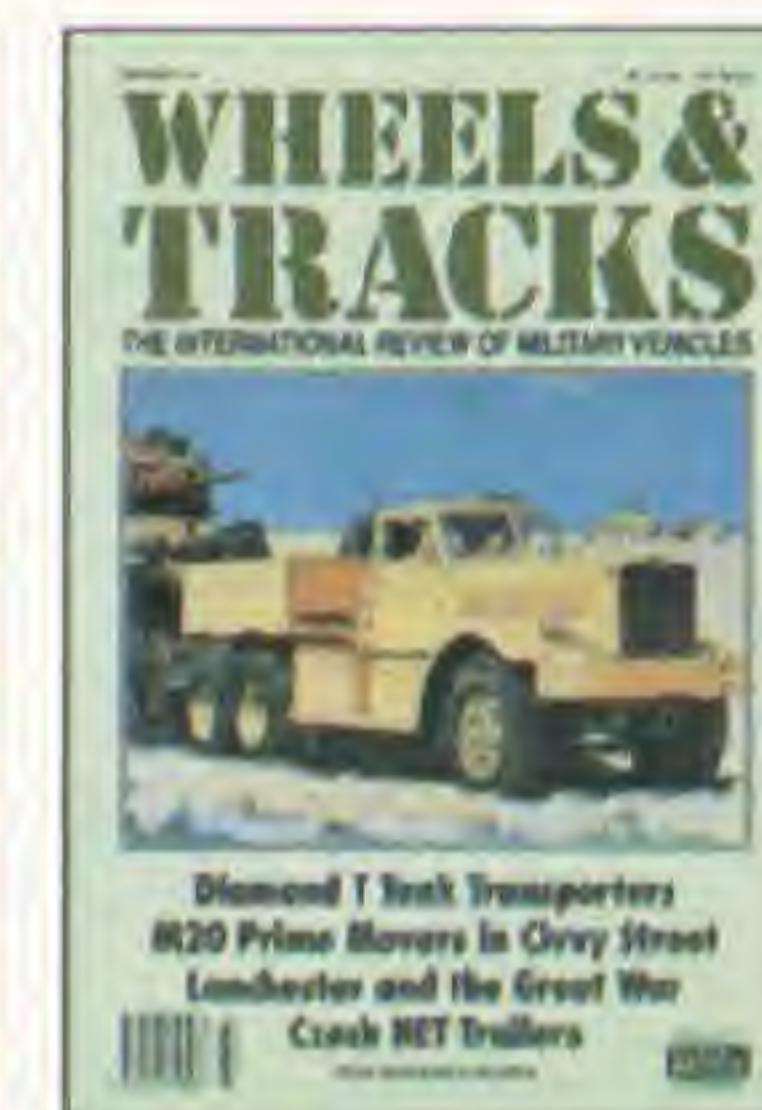
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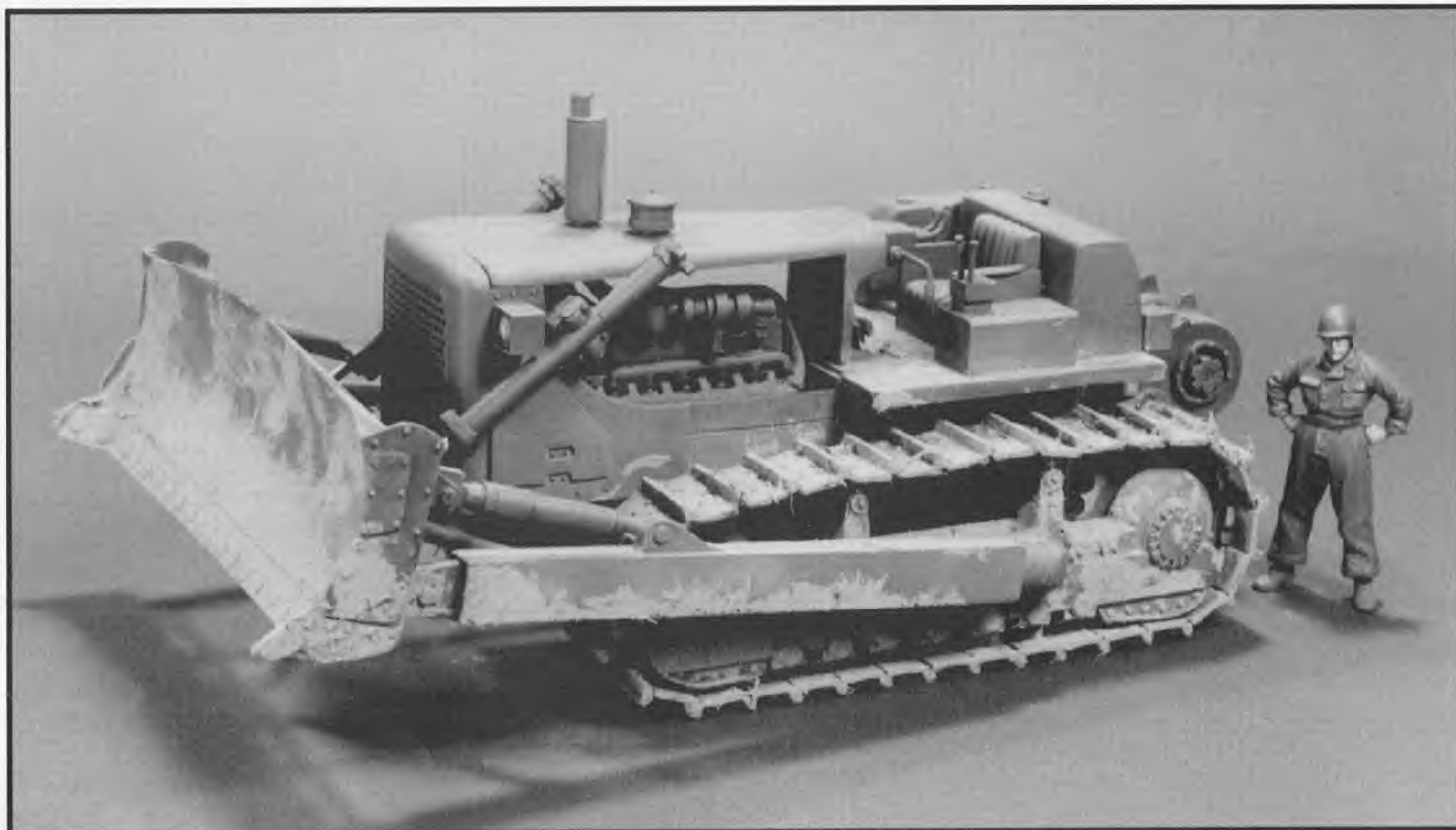
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Movin' Scale Dirt

We get dirty with Tank Workshop's miniature dozer



The good ol' caterpillar tractor is a distant relative of the tank. One could even say it's the great, great grand Daddy of the modern MBT. It was the nimble Holt caterpillar artillery tractor that inspired the tank's designers in WWI. They were used as primer movers for big and little arty there, and the "bulldozer" saw its introduction soon after that.

The Caterpillar Tractor Company goes way back. It's an all-American story. Based in Peoria, Illinois, Caterpillar began as a merger between the Holt Tractor Co. and C.L. Best Gas Tractor Co. in 1925.

The military uses for such a piece of equipment are obvious, and in many ways this helped to propel the company financially. In addition to clearing ground for airfields and constructing fortifications, their follow-up work of road building and urban restoration has been invaluable. There wasn't much part of any European city that wasn't touched by a Cat in the years following WWII.

Several different models were used during the war, including armored models. The first used were the D6's (or RD6), but the D7 and D8 were also used in great numbers. They were a common sight on the invasion beaches of Iwo Jima, Sicily and Normandy. "D," by the way, simply stands for "diesel."

Their use continues to this very day, and this, dear children, brings us to today's story.

Once upon a time...

Tank Workshop, who is working on a reputation for doing some pretty fabulous stuff, has up and released its "Military/Civilian Dozer," carefully avoiding any mention of the trademarked Caterpillar designation or company name. There was a time when companies got a big kick out of seeing their products in miniature, but thanks to our increasing litigious society, I guess this is a thing of the past. Some kid decides to eat one and then there's trouble.

I hope I don't get anyone in trouble by saying that what's in the box is your basic D8 tractor. The D8 was introduced in 1941 (just in time for the war) and the design has been refined ever since. The early D8 may be familiar to some, it was the type with the large overhead activated blade. This was called a LeTourneau blade (after the company that invented it), and it was raised and lowered via a cable that ran over the driver's head. The cable was enclosed in what drivers nicknamed the "headache tube."

This particular one is a modern variant with a hydraulically activated blade system and it's in use all over the world even today. The configuration of the D8 has changed very little since the early sixties. It says military/civilian on the label and there's not much of anything mil-spec in the box. These things were built to take abuse—whether in Peoria or Hue City.

U.S. Engineer units in Bosnia are using them right now, and I betcha you can find one at a con-

struction site near you. The biggest difference between this model and those you might find in your back yard is the lack of a ROPS canopy. This stands for Rollover Protective Structure and it's required equipment that is mandated by several different safety organizations around the world. This can be as simple as an all-steel cage or as elaborate as an enclosed, heated and sound-suppressed cab. All the dozers currently in use by the U.S. military have some form of ROPS installed.

There are several different variants in the "D" series and they have evolved over the years to become very similar. Today's D6, D7 and D8 all utilize the same track and suspension system. Within these models there are a tremendous number of options in blades, engines, ROPS and other toys. These models are usually separated by a single letter following the number, such as "D7G."

Dozers in this series were also used extensively in Vietnam where they often sported some interesting field-mods. It wasn't very common to see them with ROPS in Vietnam, as these didn't come into wide-spread civilian use until the seventies. The one notable exception was the "Rome Plow." This was a special tree clearing blade mounted on the D7 or D8. It got its name from the blade's manufacturer, Rome Plow of Cedartown, Georgia. The plow was a wicked affair with a giant knife (called a "stinger tip") on one side and a large angled blade. Great for clearing dense trees and jungle. These babies came with an elaborate screened

ROPS that extended down to the front of the tractor.

Now on to our show

OK, enough about that stuff. Let's talk about the kit. What you get is a whole box of resin, about a hundred parts or so. There are a few white metal parts, like the gear and steering levers, and a couple of hunks of aluminum rod.

All of the parts are rendered with a very high degree of workmanship. Everything's nice and straight and square. There were a few bubbles on some of the castings. They were all either below the surface (the kind you can't see when painted), or at the very bottom of some of the undercarriage parts.

The first order of business is the clean-up. There is quite a bit—not as much as their Dragon Wagon, but it's still a chore. Most of it ends up being a simple scribe and snap, however the track roller frames, final drives and final drive housings all have very elaborate overpours. It took some careful work with a nice fresh razor saw to free them.

Because of the severely compulsive nature of my personality, I like to get everything cleaned up first, then organize the parts and make sure everything is there (it was). TTW provides a super helpful drawing of all the parts for your reference. This came in way handier than I first realized. This ain't no tank.

These vehicles are essentially huge engines with tracks mounted on them. I divided the work up into three stages. The first was the tracks and roller frames; then the engine and main frame; then finally the blade.

The roller frames are pretty simple. The rollers themselves just pop into slots on the bottom of the frame. I saved some time and didn't do any clean-up on the rollers. I just left their overpour edge facing up into the roller housing (after cracking off the overpour). They're really buried up in the frame and there's no way you can see them.

The final drives have a locating hole on the roller frame and I drilled this out on both sides for strength. You'll need a pin on the inside face to attach both track assemblies to the main frame.

O.K. The front wheel (the idler?) gets an aluminum axle which is supposed to help gauge the tension of the resin link-to-link tracks. It slides back and forth in the frame. I left it loose while I added the tracks, but I really didn't need to. The 32 links fit fine. Dozer tracks don't have much sag, so don't add too much.

TTW was clever enough to give us mounting plates to put on top of both the idler and drive sprocket locations. This lets you get a little wild with the drilling. Adding these was the final step in the assembly of both frames. I set them aside and went on the next step.

The main frame is very simple. You add a few big hunks to the driver's position and that's that. You get a choice of adding the big 2,000 lb. winch on the back end and if you do, sand off the PTO access plate.

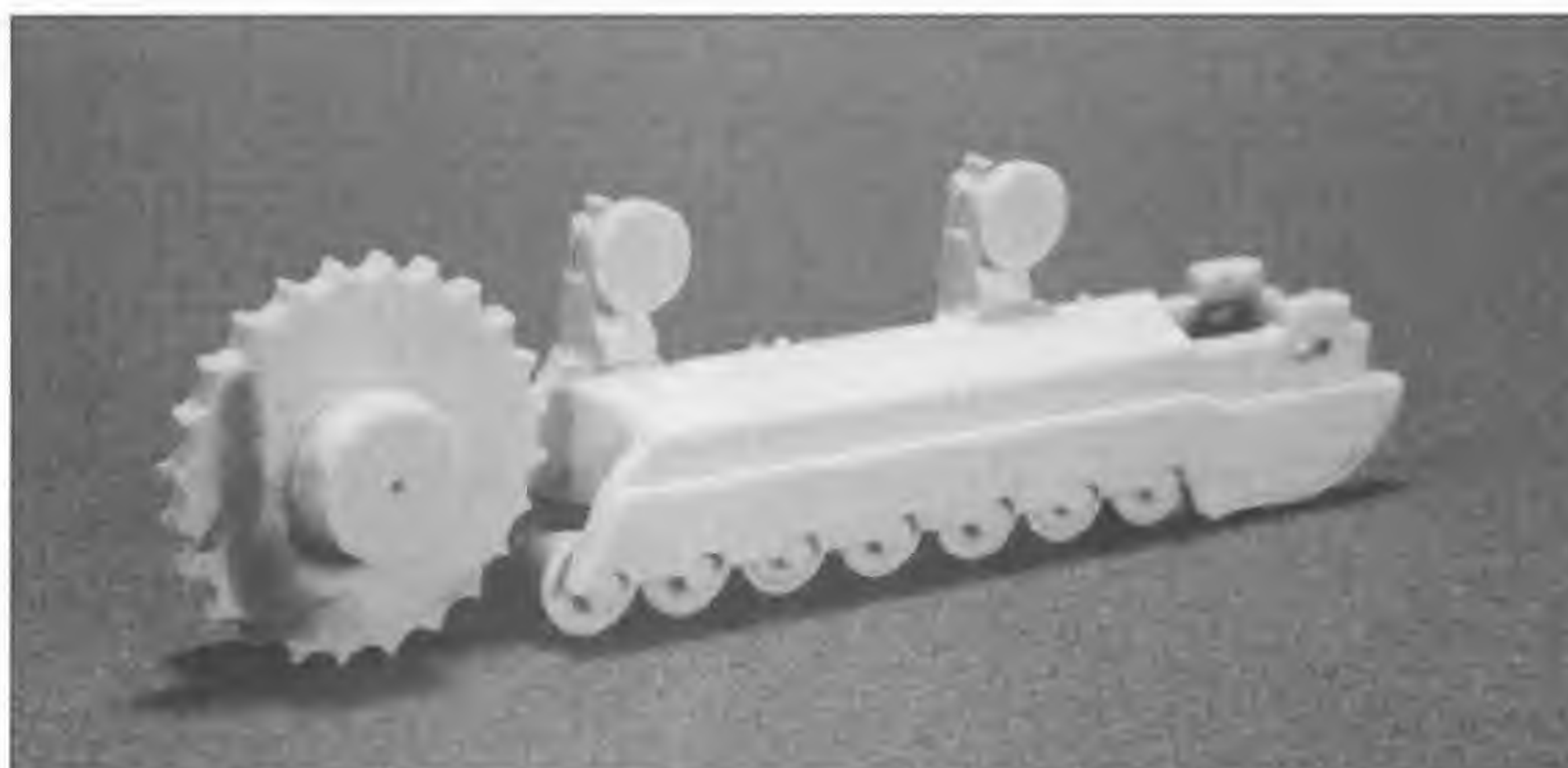
The engine is next and it's simple. However, in spite of excellent line drawings, placement of some of the parts is difficult to discern. I must say I took my best guess on some of the parts. The trouble is that the turbo charger (I think it's the turbo charger) has a tube which gets vented to a housing mounted on the engine deck. This is also true of the muffler. I test fitted the engine several times to get the proper position of these two gizmos. I ended up sort of winging it on the vent housing.

There's tons you could add here with the proper reference. (Honey, stop the car—it's a bulldozer!) Fan belts, wiring and hydraulic lines all await the truly geeky.

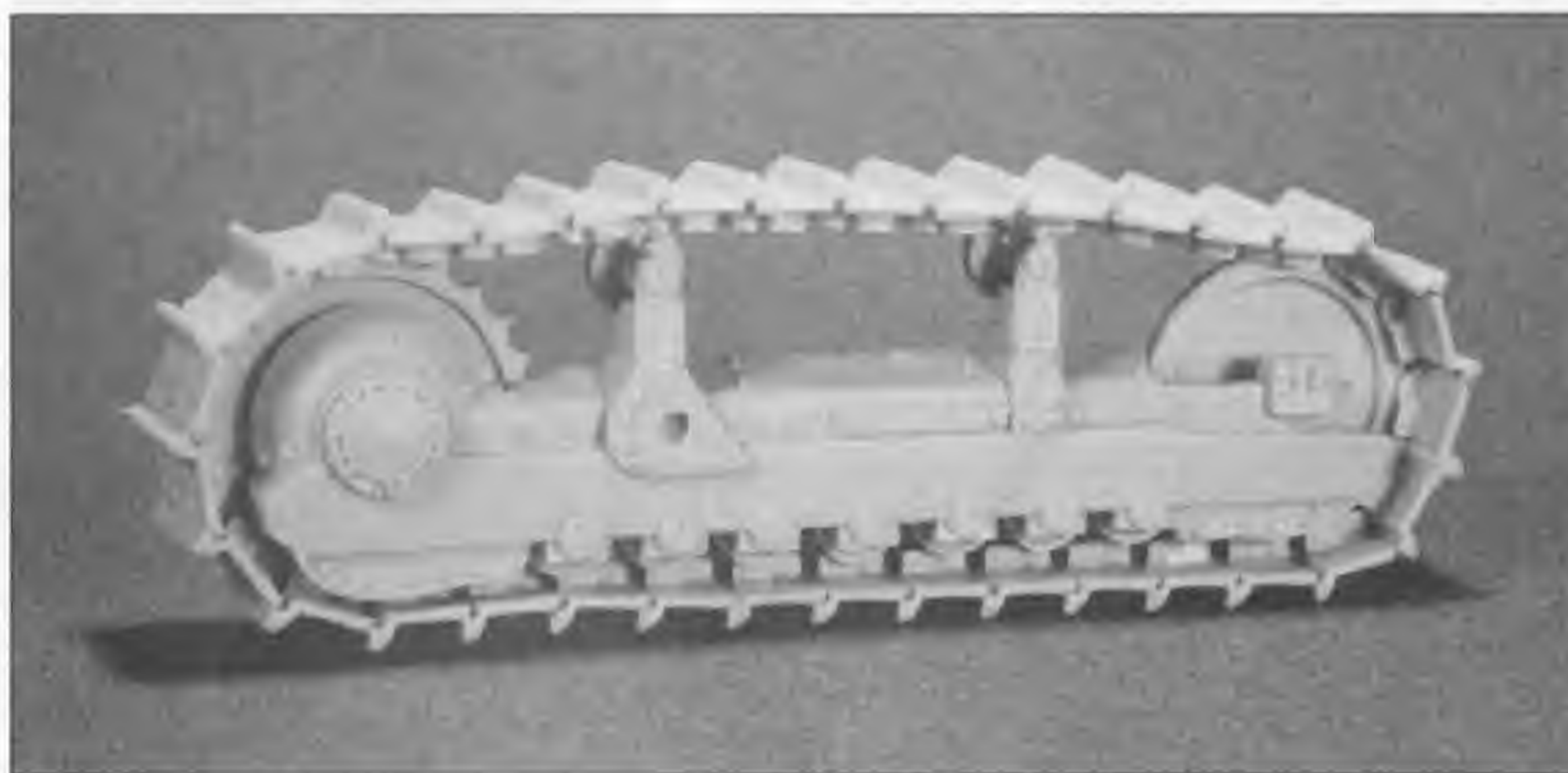
The white metal parts all get added to the driver's position. These are the steering levers, parking brake (the long lever), the transmission lock lever and the dozer control.

And now for the tricky part...

It took me quite a while to figure how the suspension worked. It is absolutely nothing like a tank. Each of the track roller frames are designed to pivot away from the



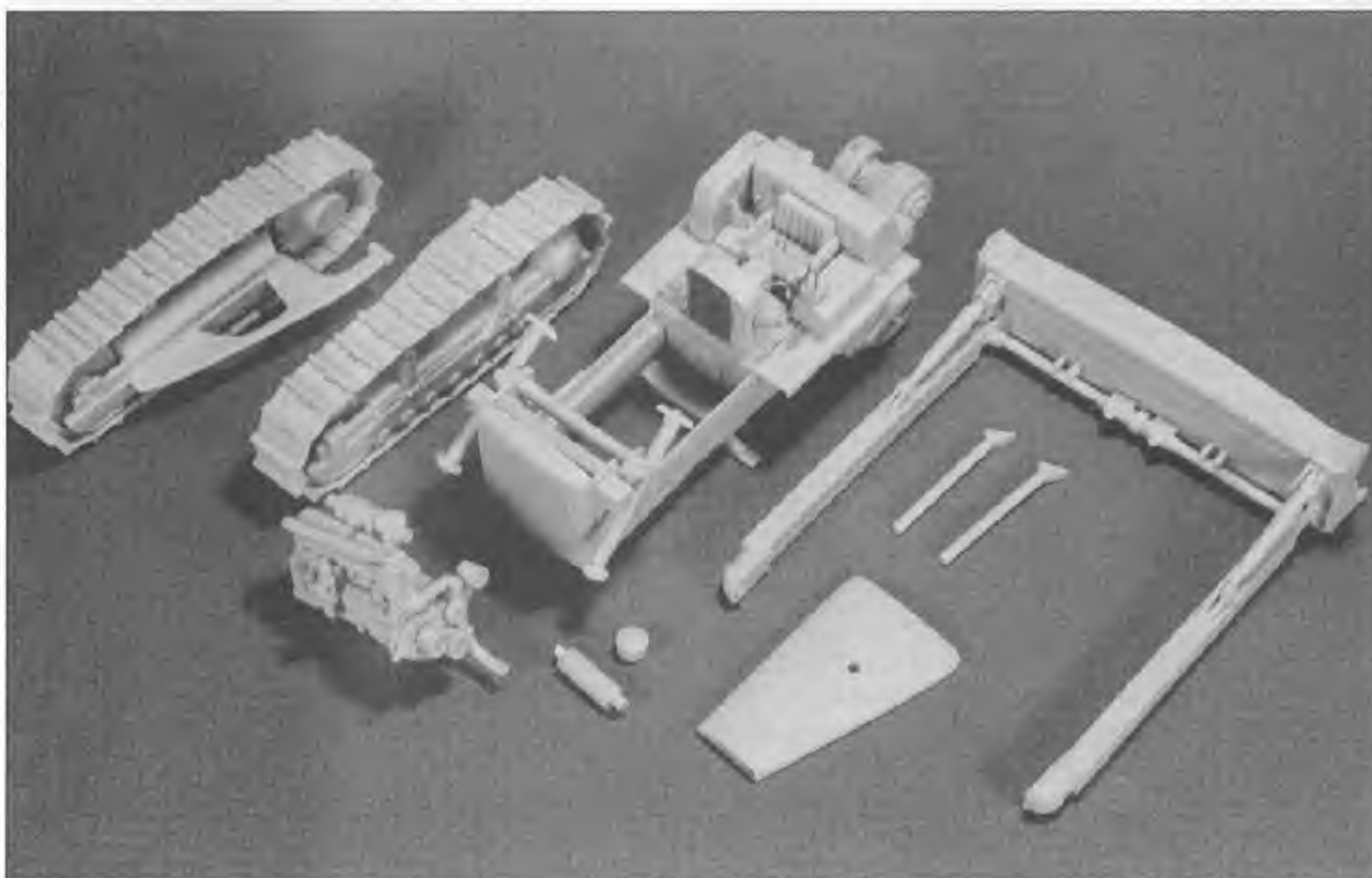
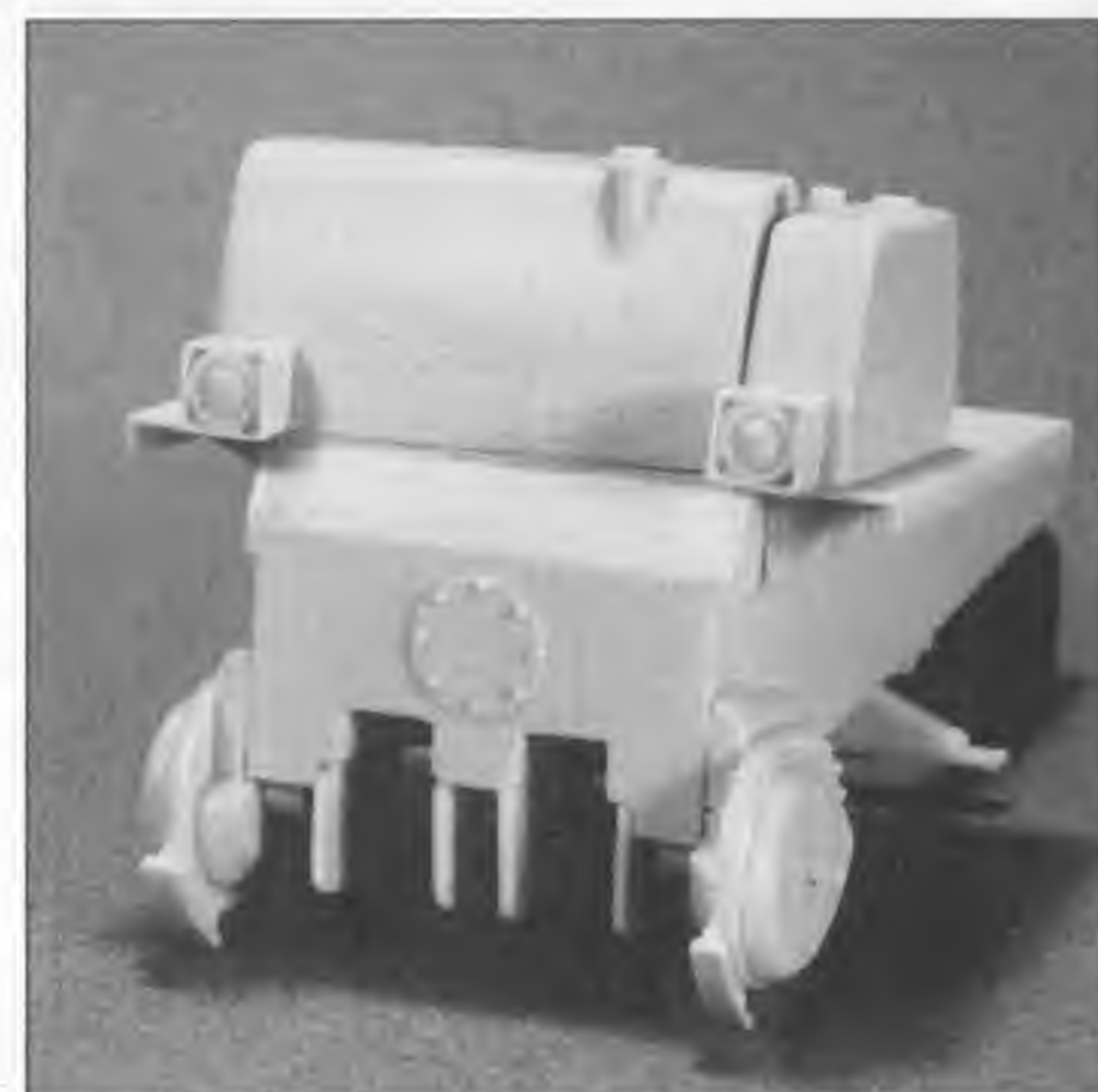
Left: the back of the left side roller frame. The over pour was a tough one on that sprocket. (You should see my finger!) Below: the back end. Note the PTO access plate. This should be removed if you decide to add the winch. Below that are the alignment plates for the track roller braces. Also note the pegs in the final drive housings.



back of the main frame of the dozer, much like the jaws of an alligator. This is Caterpillar's version of an articulating suspension. Each frame is only attached at the final drive and each frame's diagonal brace. There are no forward attachment points at all, so don't look for any. The front ends of the braces rest against a large cross bar just under the engine.

The diagonal braces are two big wing-shaped pieces. I wasn't quite sure which was left and right. I finally figured out that the back end has a slight curve and should face up when installed in the correct position. I glued these right on to the inside of each roller frame. There are no locating points and it strikes me that they'd be easy to break. You may want to pin them with some brass rod.

Once you install the roller frames, the ends of the braces are supposed to align into four plates located between the final drives. No matter what I did, they wouldn't line up. This area is all but invisible when the



Above: all the sub assemblies laid out and ready for painting. At upper left are the finished track sections, in the center is the main frame and engine, and the blade sub assembly is on the right.



Above: the right hand side of the tractor. The engine cowling is narrower here, so it's easier to see the engine. Above right: the winch. Right: the cockpit? Below: a good peek at the blade mechanism.



model is complete, so I didn't monkey with it for very long. I would suggest adding the plates after the frames to help align them easier, or even pinning them to the braces, then installing them.

The blade is a no-brainer. Everything went together lickity-split. Each Cat has several blade models and they are titled with the dozer number and a letter. The kit's blade is the 8A type.

Be smart and leave the blade corner braces off until installation of the unit on the dozer. Also try to cant the blade arms in about 5 degrees. This will help them make contact with the roller frames during final assembly.

You'd better paint now (mister)

And speaking of final assembly, once all the above is done, it's time to paint. The model is so complex, no way you'd get paint on all the surfaces after assembly.

I shot everything with a perfectly lovely shade of Army Olive Drab, making sure to get in all the nooks and crannies. Your other option is bright civvy yellow. I mixed Floquil enamels for the tracks and engine. Black, brown and a touch of both red and gunmetal, gave me the beat-up look of metal. I hand painted the tracks and engine, then dry brushed the engine with gunmetal.

For the tracks, I went back and lightly oversprayed them with Polly-Scale Bright Silver, paying special attention to the track cleats. This sounds weird, but check out a real dozer. Constant contact with the fine soil particles gradually polishes all of the metal surfaces. The entire outward surface of the blade also got a similar treatment.

Once everything is dry, I began the weathering on the surfaces that would be hard to reach, like the insides of the roller racks. I added the engine, then the deck, installing the muffler and air vent in their proper locations.

The roller frames went on next, then the whole thing was touched up to remove any glue marks.

Major John S. Tricky

Final installation of the blade was major tricky. I

drilled out the backs of the blade arms and the roller frames which receive it. This left the blade free to move up and down. The difficult part was setting the shafts of the hydraulic arms. These are attached to the front of the engine compartment into hinged mounts and their ends mate with the back of the blade. TTW gives them to you as solid parts, but I found that I needed to carefully remove the tubes from the hinges, then cant them outward 2 or 3 degrees. I also drilled out the tube shafts so that the hydraulic arms actually worked. The instructions point out that the arms should be made from the enclosed aluminum rod and you should leave them unpainted.

Once this was done, I was able to align all the various blade parts and freeze them with small drops of super glue. The blade is designed to end up in the raised position. Ambitious Man could drill and pin all the linkages and hinges to create a completely working mechanism.

Yes, it's all confusing, but if you're aware of the above, the kit will go together much more smoothly.

That's Mr. Mud to you sir

As a final touch, I mixed up a batch of Hudson & Allen Mud. This is a great little product impressively consisting of a bag of brown powder [see *MMiR* V2/3—Ed]. You can dust it on like pastels or mix it with water. I used a small mixing cup and put a few drops of water in—you don't want it too runny. I sprinkled in a few pinches of brown static grass and applied it all over the lower portions of the model, paying close attention to the roller frames and blade. It looks great going on, but I wasn't as pleased when it dried. The material does look like dried mud, but I guess when I think of bulldozing, I think of doing it through nice, fresh, moist dirt (yummy). You can create this look by running down to your local Art store and snatching up a bottle of Acrylic Gloss Medium. Mixed with your mud, it will retain "the wet look."

I bulldoze off into the sunset

Well that's that. This is a very interesting model and a welcome change from the standard fare. I don't think it will present any real challenges to the true resin junkie. The blade and suspension were the most difficult, but they weren't major calamities.

There's lots you can do to this kit too. Hydraulic lines, engine wires, ROPS canopies, winches, detailing and light options are all among the super details you could add.

Vietnam era modelers can find a number of uses for this kit. It was used by the Army, Marines and the Navy there. True model Gods can convert to the Rome Plow.

The only downside, and this depends on your pocketbook, is that the kit is pretty expensive. The retail price is \$160.00. This strikes me as a tad high for a kit of this size. It's not quite as complex as TTW's M26 truck which costs \$200.00. This is too bad, because by the time it gets overseas it might be priced out of the range of most modelers.

I still give it a thumbs up though. It'll make a great addition to your collection and the diorama opportunities are vast. ☺

—Ken Dugan

MMiR RECCE

The Tank Workshop Military Civilian Dozer. Kit number 0039. Suggested retail \$160.00.

Kit graciously provided by the manufacturer. Available from your favorite retail or mail order outlet, or see the Hobby Depot ad on page 21.

References

The pickins' are slim. Here's what I found:

Caterpillar Farm Tractors, Bulldozers & Heavy Machinery by Randy Leffingwell. Motorbooks International, 1994. A little pricey (\$29.95), but it contains a good complete history of the company and will provide some understanding of the complex numbering and lettering system. Info on wartime dozers is sparse.

Matchbox/AMT Caterpillar D8, 1/25th scale kit, PK-6123. An odd source for reference, but it turned out to be quite handy. A friend had the kit partially built and studying it helped figure out the mystery of the roller frames. It might not be something you want to own, but if you can find it, it's cheaper than a book.

Your local Caterpillar dealer Check in the Yellow Pages under Construction Equipment. There are a variety of factory brochures which illustrate the different models and their features. They should be freebies.

Look for a local cat. Find a construction site and shoot a role of film on the bugger. You may want to see the foreman before you venture on the site—and be careful!

Also check in your Yellow Pages for a National Guard or Army Corps of Engineers unit nearby that might use the D6, D7 or D8. They're generally receptive to visitors. Bring your camera and the model, they might enjoy seeing it.

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Flame On

DML jazzes up its Easy Eight kit and creates a 105 in disguise!



Most flame-thrower tanks based on the Sherman were created by putting the flame weapon in position to fire through either the main gun tube or the bow machine gun port of the basic gun tank. The POA-CWS-C5 was a bit different. The 75/105mm M4A3 chassis was used and the flame weapon was mounted in the sight outlet in the mantlet just to the right of the main gun tube. In the early flame versions one or more standard weapons were lost. In the POA the gun remained functional. Intended for use against the caves and coconut tree log bunkers of the Japanese in the Pacific, it was designed to give the crew the option to use whatever weapon fit the situation. The POA-CWS-H5 was the ultimate Sherman flame-thrower.

By April 1945 the Army had POA-CWS-H5's in testing in Hawaii and these were VVS suspended M4A3s with 75mm guns. By July they were testing a version with the 105mm howitzer now with HVSS suspension and in total only 70 of the H5 model tanks were converted. In order to accommodate enough flame fuel, the 105mm version only had 20 rounds of 105mm stowed onboard but that was enough to make it a true double barreled weapon system. The flame gun could put its 290 gallons of

jellied gasoline (napalm) out 100 meters and would shoot almost 30 three-second burns before running out of fuel. Used against a cave, for example, it would consume all the oxygen as it burned in the opening thereby suffocating the occupants.

The alphabet name is partially an acronym meaning: Pacific Ocean Area-Chemical Warfare Service-Hawaii Model #5, in reference to the location and organization that developed the weapon system. The U.S. Army tried to field the new tank before the end of WWII and units equipped with them were training in Hawaii when the hostilities ended. After the war, many tanks were cast off to the Marine Corps including M4A3 HVSS (Easy 8) Shermans. The Marines got some of the POA tanks also and when Korea became a war, at least one USMC unit (thought to be Company F, 1st Tank Battalion, 1st Marine Division) took its blow torches into combat in late 1951. So while it might be argued that the POA did not see as much combat as its WWII cousins, it does make a worthy modeling subject.

DML should be applauded for expanding the line of Korean War armor with this choice. Even better for us is that being converted in real scale from the M4A3 105mm howitzer tank, the 1/35th scale POA is also a 105mm tank in disguise. In fact, converting the flame-thrower back into the

howitzer totter is incredibly simple. Just leave off two parts! Having said that, the making of the rest of the kit will consume more time...

Start at the dirty side

DML previously gave us a M4A3 tank with the Easy 8 suspension using the hull and many parts of the old Italeri M4A1/A3 kits. The first two HVSS suspended Shermans they released used the VVS hull from the Italeri M4A3 which meant that you had to cut off the VVS mounts before putting the HVSS ones on, and that drove the difficulty up a bit. DML's POA gets an entirely new hull bottom which is all set to just slap the HVSS suspension on it. This is good too because it shows us DML is sensitive to the bitching heard about the hull. Those letters you sent did some good. However, I still spent most of the building time on the suspension, even with the new hull.

The drive sprockets are nice but have center plates that mount a bit loosely. They also install on the hull too close to the inside and must be spaced outward a small amount to get the tracks to run true. You can see the problem if you hold them on the hull and look down the line of the bogies once the bogies are on. The teeth should be evenly spaced relative to the track/bogie center line. I used

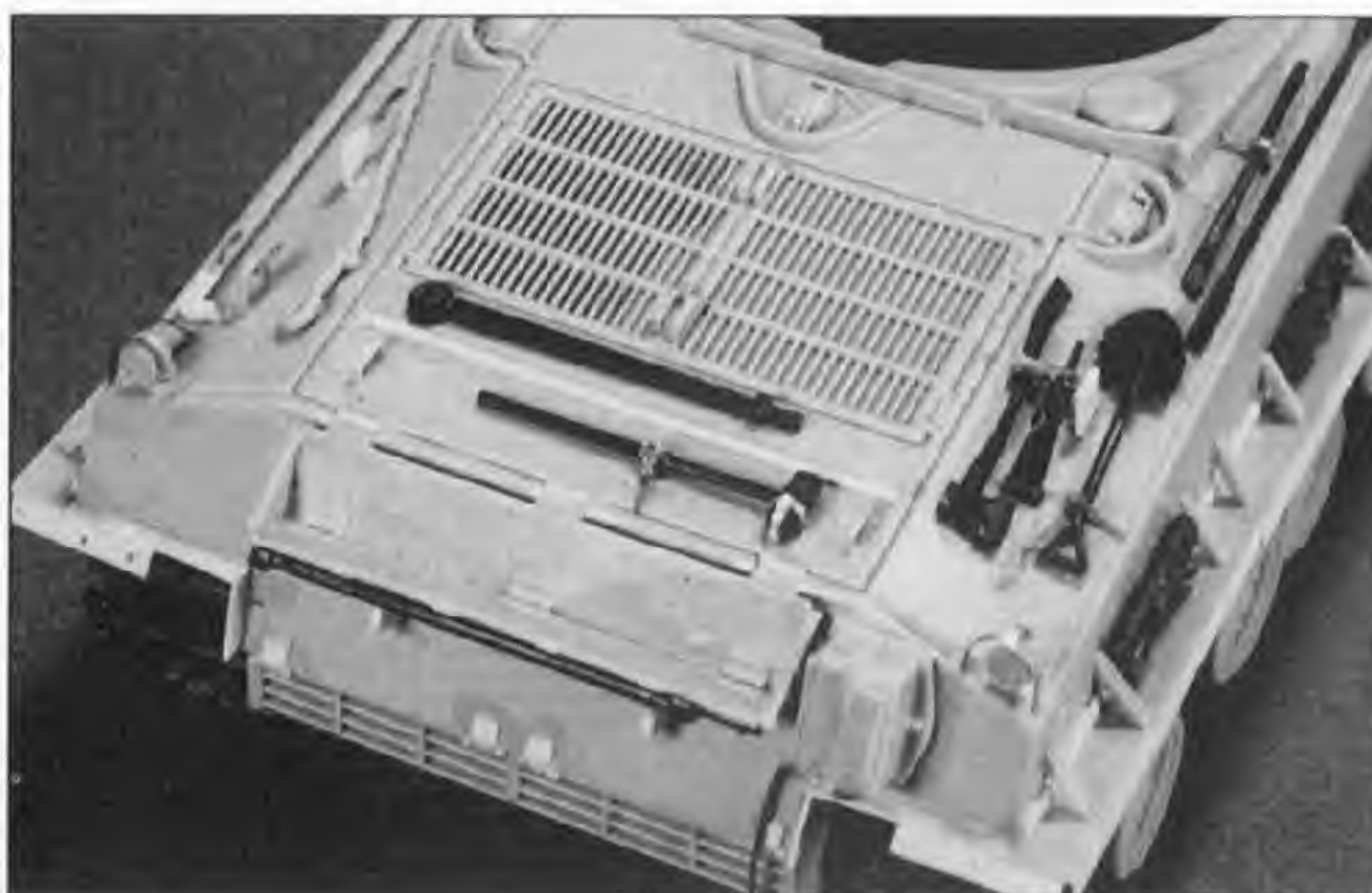
styrene bits mounted to the boss on the hull to get the proper alignment.

Detail freaks will note that DML skipped over some of the more prominent bolts on the hull parts. The bolts that hold the suspension mounts on are not there and the row that runs up the side which hold on the transmission housing are not given either. Others are MIA too, but these are the most obvious so I punched out some small circles with a Waldron punch to simulate these. The transmission nose doesn't have the bolt heads on the hull bottom but these are not visible if you put the thing on a base as I will later.

A word of caution is now in order. The Italeri sprue DML includes has both the rear hull plates for either a M4A1 or M4A3. The instruction sheet tells you to use the wrong one. The first of several annoying things this kit inherited from the old Italeri sprue trees is the M4A3 rear hull plate. The details on it are very crude and that goes doubly for the exhausts. They are just rounded lumps, but keep in mind the exhaust grill covers most of this sin. I chose to leave the area "up under the lady's skirt" and moved on. While on the back end parts, note that Italeri has two tow lugs (per side) molded on the plate. For the late model POA hull I cut off one lug on each side.

The kit provides the plastic panels to fill most of the area on the bottom of the hull sponsons. This covers them well and only two holes are left per side that need attention which I took care of with putty. One is at the front above the drive sprocket and the other is over the rear idler wheel. The filler plates for the rear part of the sponson bottom are slightly too long for the M4A3 upper hull. This causes the hull to sit too far back and it will then not meet at the bolt strip at the front end. A little work with a file solves the problem. Zip-zip, check the fit, zip-zip, check the fit, etc.

Be careful with the instructions in regard to the front bolt strip. Install it on the top of the transmission housing only after looking at a photo of the real tank. Don't follow the drawing or you'll be sorry. You have been warned! DML's instructions are very good most of the time but this set is typical and is like the breakout of the 94th Division from the Saar River bridgehead in the Spring of '45. You have to watch for mines!



At the rear of the hull the exhaust deflector grill is a problem for the perfectionist. It looks like Italeri couldn't figure out that M4A3's had two types, so their grill looked "kinda" like both of them. It has the shape of one version and the grill pattern of the other—"sorta." Fixing it would mean making a new one or putting the one in the Tamiya M4A3 on your POA. The latter is fine for Korea since both types of grill were used there also. I added two simulated support braces for the deflector which are hard to see without picking the tank up. They install from the bottom of the grill and run to brackets on the rear hull plate. The deflector grills are actually two assemblies on the real tank and each has a pair of hinges at the top where they attach to the rear hull overhang. I made these with styrene rod.

The idler wheel mounts are too small and do not have the adjuster plate detail so you could fix them if you like. I had trouble later with the track being too loose and you can fix this early on by mounting the idler wheel axles slightly rearward by means of an appropriate spacer. I wish manufacturers would always build in a way to adjust the track tension on link-to-link tracked tank kits. The real things need this adjustability to fine tune the track blocks and we need the help too.

Onward and upward

The cast nose is baby-butt smooth so I messed it up by running a Dremel bit over it and then attacking it with glue and a rag to get a cast texture. I also added the towing pin and step bar details to the clevis mount bumps on the nose. I simulated the comb device found on the nose of many Shermans but not in any kit, with thin sheet styrene.

The kit tow cable is from the old familiar Italeri stock and has to be shaped carefully and can be easily broken when trying to get realistic (meaning heavy-looking) bends.

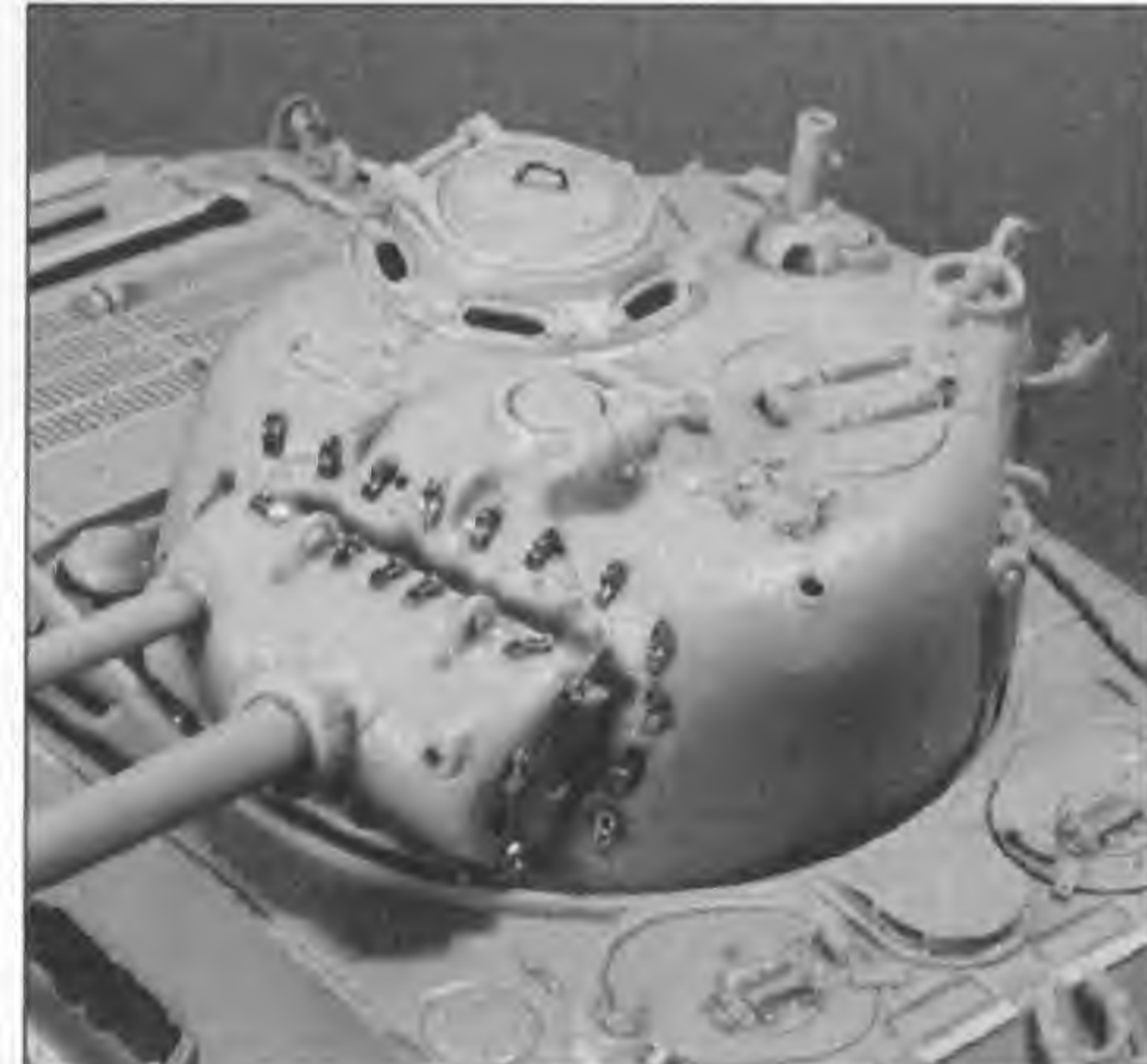
The headlights were "Dremeled" to get parabolic depressions for two L116 lenses from railroad bit-maker MV. The brush guards and all the other photo-etched stuff I used come from On The Mark brass for the late model Sherman. I hate the hassle of photo-etch but some of the OTM parts look really good once you stop sticking your fingers to everything. I added an electrical lead wire for the horn with copper wire.

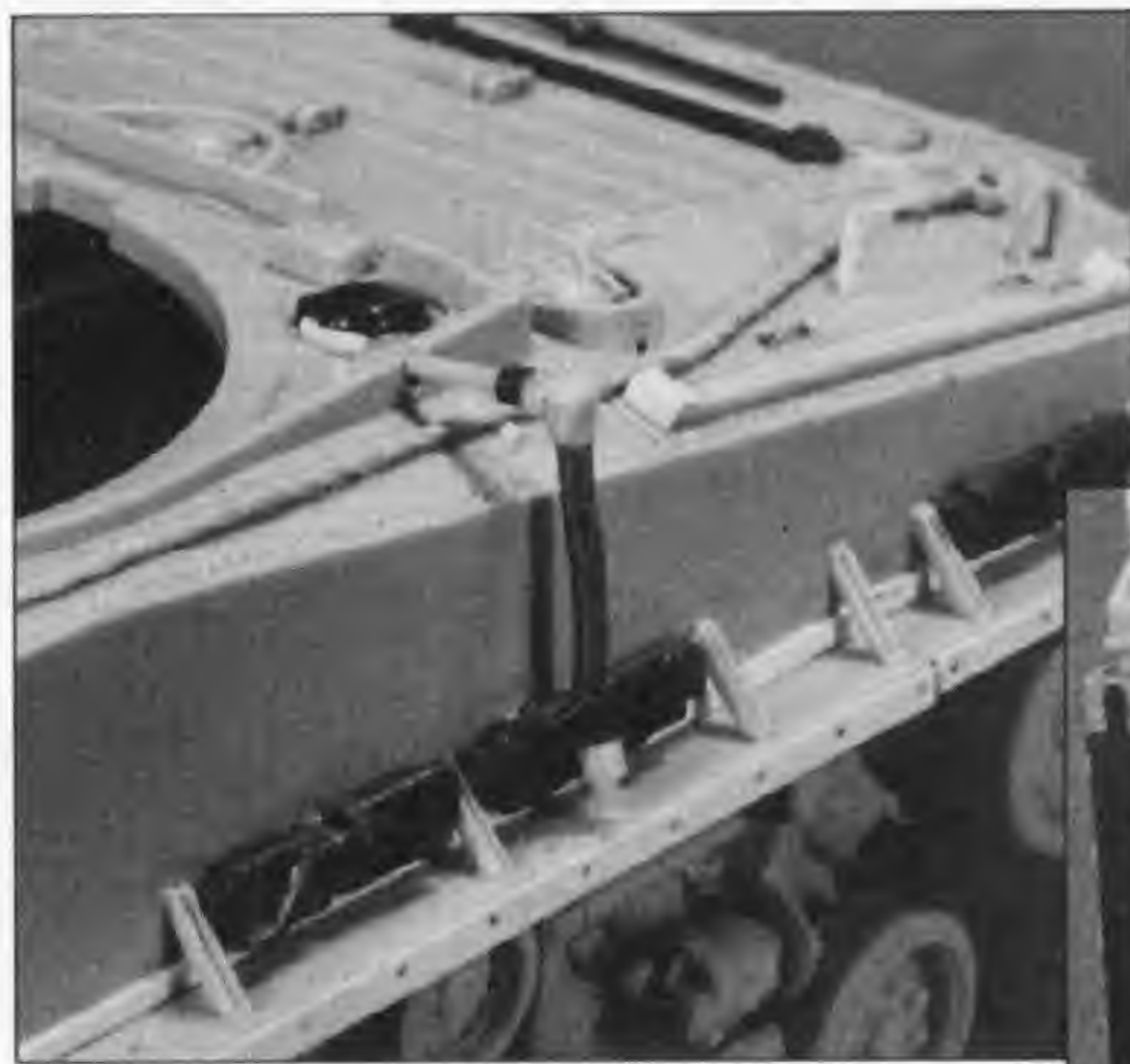
We get a new travel lock (the old Italeri one is in the box too) and some metric dimensions for placing it. Look at the last issue of MMR for line drawings and note that the lock mounts low on a 105mm hull and also that it is not centered on the hull front. The gun tube is not centered in the turret either, so make sure you get it straight below the gun tube.

I also put the two periscope bullet splash guards on the top edge of the hull plate. The kit's old hull doesn't have them at all but does have some molded lines on the top edge of the front plate that approximately show where they go. First I cut a shallow notch in the lip of the plate and then put a strip styrene guard in each notch. Easy. Really.

Sidewinding

The fenders drove me nuts! This in part because the instructions show their installation poorly. The kit hull has the fender mount flange molded on the lower sponson sides, a common industry practice, so normally no big deal. The fender parts are shown in the instructions glued to these but if you do that it just makes the parts stick out even further. I removed the flange detail from the side of the hull first and then put the fender parts on the hull. I followed by installing the angle braces and worked a new thin strip of





Left: the re-fill tube described in the text. Below and right: the rear vent supports.



styrene under them to simulate the flange I had removed earlier. The fenders were pretty strong once everything dried.

Of course, as luck would have it, it wasn't until later on, after the tracks installed, that I figured out the fenders were too wide. Damn! Wish I'd known that in the last paragraph. One quick look and I knew removing them would not be a clean operation. Breaking them off would probably destroy some of the angle braces so I fired up the old belt sander and ground the offending width right off the suckers. Inevitably, I lost the lip at the edge and I had to be careful to not go to far.

Now I had them at the right width (I got out the Hunnicutt and measured it!), I installed new edge lip parts made from strip which I pre drilled to simulate the fender skirt bolt holes. Take my advice and deal with the wide fenders first. You can avoid all my screwups by narrowing them before you install. Or go ahead and pitch them entirely and make new ones—unless belt sanders turn you on.

The kit fenders did not extend all the way back to the end of the hull so I put a filler piece at the rear of each sponson. The real tanks also came with flap like sand shields at the end of the fender which are not done well in the kit (too thick, too wide). Make new ones if you want but many tanks had these knocked off. You can add a drilled strip of styrene on each side to show the exposed mount the shields normally attach to. The kit front fender shields were used and had to be narrowed after I fixed the width of the fenders. I also added their small support gussets.

Hull detailing

The luggage rack in the kit is OK but does not have the underside detail or the cleaning rods that mount on the bottom of it. It took a cleaning rod part from a Tamiya kit to solve that. Also on the back, the kit gives you a telephone box and tells you

not to use it for some reason. Most tanks in Korea had these in spite of what DML thinks and the USMC POA's did too, so go ahead and install it. I ran a cop-

per wire from the phone box down the back of the hull plate and under the exhaust deflector to simulate the electrical lead connection.

All the POA flame-thrower tanks had a tube and hose fitting on the left side that probably served to allow fast refilling of the internal flame fuel tanks. The kit box shows this on the left side but the kit does not give us one. Unfortunately, I could not come up with a good photo of it, so what you see on my tank is partially conjecture. I started by making the cutout notch in the side splash rail which allows the feed pipe to pass through. I drilled a hole in the hull top inside the splash rail and made a circular washer-like

hole in the lock tab on each one. I also used photo-etched periscope guards from OTM here. The brass set comes with a bunch of equipment tie downs so I put three on each side of the driver's openings and used others on the back of the hull in several places. I then scrounged in the parts bin for an old Sherman hull from which I cut off one of the fuel tank filler caps. None of the DML/Italeri hulled M4A3s have the filler cap for the auxiliary power unit which is located inside the left splash rail. I also added drain holes to the splash guards while I was in the neighborhood.

The kit tail lights were used and covered with OTM photo-etched guards. The rear lift hooks are a bit dainty looking so you could replace them with wire copies if so inclined. The numerous grab handles provided in the kit are a bit heavy handed but I used them anyway. Sorta wish I hadn't now. The pioneer tools are substandard in all the Italeri based kits so I replaced them with Tamiya and Nichimo ones from the parts box. On the engine deck there is

a horizontal raised line aft of the cooling grills. This is supposed to be a flat strip of steel, so get rid of it and replace it with a piece of strip styrene. I used more to make the two vertical standing parts that support the engine grills when they are opened.

Lid basics

The turret is all new and is very nice with a few things to fiddle with. It represents a very late WWII 75/105mm turret and has the thickened armor cheek on the right side, a first for any Sherman kit of any kind. It also has the thick belt armor bulge around the side of the commander's

The front mantlet. Did anybody get the name of that orthodontist?



fitting for the fuel pipe to simulate a reinforcing flange. The pipe is wire, bent at 90 degrees where it goes down into the hull and long enough to let the rubber hose part I added next to hang down the left hull side. A block of plastic forms the outer end of the pipe and the hose bits were made with a short piece of electrical solder and styrene tubing. Fairly easy.

The driver's hatches were further detailed by cleaning up the crude hinge detail and by putting a



Turret bustle. Note the special mount for the .50 cal.



Above: the left side brush guard by OTM.



cupola and that is not available on any other turret either. Since the POA tanks were modified from 105mm howitzer tanks the turret is a legitimate late WWII-Korean War vintage 105mm turret. That means this kit is superb for raiding if you are a kit basher. It also means you can do a Korean War 105mm tank by just leaving off the two parts that make into the flame tube. Hey DML, how about re-releasing it that way and pitch in a bulldozer blade while you're at it? Details for the turret come from a complete sprue tree that is from the Pershing kit. Since the Pershing is sweet, this is good economy for DML and we end up with more goodies for the spares box.

The turret has simulated cast texture and this is well done over most surfaces, but not all. I supplemented it in the smoother spots which tend to be low on the sides. The upper and lower halves of the turret needed a little putty at the joint and while I was fixing that, I made a new weld bead around the turret bustle with the same stuff. There are no casting numbers molded on so you might want to add some here and there. I had to use a little bit of putty after putting the cupola armor on, since the fit was not that good. That was easy to fix.

I also discovered that the loader's oval hatch overhangs outboard too much and this may be a size problem. The hinge detail should be slightly further inboard but the distance is very small so I just built mine the way it comes. I only bring it up so the perfectionists can have some more to do. Finishing up, the loader's hatch lock is provided on the ex-Pershing sprue and the instructions do not tell you to use it. Use it.

Moving on to things I could easily fix, the cal 50 mount is not correct for a 105mm armed Sherman. The 105 turrets had a second rooftop ventilator (which is in the kit) but that interfered with the standard .50 mount. A small three legged inverted-bowl shaped mount was invented which raised the pintle support tube over the ventilator. That part is not provided by DML but I got one from a Verlinden 105mm conversion kit. This solution is a very expensive way to solve the problem. The Tank Workshop 105 conversion has this part also, but again that would make for an expensive way to go. Borrow a

friends and copy it, perhaps.

The DML kit includes the front barrel support for the .50 cal but the instructions mistakenly tell you not to use it. Minefield explosion! Go ahead and use it and check the photos here for location. The OTM brass set has the parts for this thing too, but you'd go insane putting them together so just use the DML one. It looks "Mahvalous." The solid rib that supports the commanders blade sight (part A31) should be a piece of bent metal. You could fix this, but I didn't.

At the back of the turret, the instructions show the stowage mount for the .50 cal as being in the center of the turret rear. KABOOM! This is wrong, mount it slightly to the left of center if you want to be PC, and hey, fill in the old hole. I added another OTM periscope guard to the turret roof and I replaced the hatch handle rib detail on both hatches with copper wire handles. I cut out the vision ports in the commander's cupola and filled them in later with Krystal Kleer followed by Clear acrylic paint for strength.

Final finishing

The kit gun mantlet is shaped correctly but does not have the normally prominent casting numbers if you care. No provision is given for the canvas cover brackets either. Many tanks did not have them installed. Some did and I decided to add the brackets but not the canvas. I went ahead and

installed the brass ones from the OTM set. When I finished them, the tank looked for a while like it had just come from some lunatic Orthodontist. The OTM brackets are a bit large it appears, but not enough to detract from the final result. Besides, they would be even harder to add if they were smaller!

The 105mm howitzer tube and the flame gun barrel are made from two halves. This makes them hard to get round at the end when removing the resulting seams. This 105mm tube is the most accurately sized one in any 105mm kit yet. Most of the resin ones you can buy are too fat at the mantlet end. There is a bad line drawing floating around that gets these guys into trouble, but DML has come closest. Maybe if we told everyone else that the gun tube is shared with the M2 towed howitzer they could measure one correctly. Nah, gotta keep some secrets.

Tracklaying

She got her daddy's car and cruised to the hamburger stand now... Cause she had fun, fun, fun, while her daddy laid tank tracks all daaaay (apologies to the Beach Boys). Sums it up.

Oh, yeah, I forgot. The tracks look great and I don't mind the time spent. I would rather have a model which allows me to build a diorama of troops installing them, or maybe one that hit a minefield. Kaboom! Broken track. Breaking track, back breaking track. Sums it up.

Look at it another way! Go on! You can brag to your airplane modeler friends that for the money you got about 500 parts to build. For the same money they got maybe 25 parts to build. Cool. Tell them the box weighs more too. Rub it in.

Mold ejector pin marks on the face of each track link. You add each center guide tooth. The things are slightly loose unless you adjust the idler position, probably because the inner track pads look like well worn ones. Test fit, test fit, test fit.

Sums it up

My POA is finished in basic jarhead green (more like a medium green) and drybrushed with lighter shades of the same. I used the kit's decals and the yellow USMC makes a nice accent to the scheme.

I'll to the point now since I think you would rather know if I liked the POA kit. Yes. Very much. I even enjoyed the emotional roller coaster ride it put me on as I peaked on the good new parts and fell screaming into the sin-curve trough associated with the old Italeri parts. Uppity-up, down-diddy-down, and finally zooming to the end product—a new Sherman type to add to the growing collection. I loved it, I hated it. I loved it. Get off at the top of the curve and you will too. ☺

—Pete Harlem

MMiR RECCE

DML M4A3 HVSS POA-CWS-H5 Flamethrower. Kit number 6807. Kit graciously provided by Dragon Models, Ltd. Suggested retail price \$32.98.

References

M4 Sherman by Michael Green, Motorbooks International, 1993. Photos of 105mm HVSS tanks were of use in this one.

Sherman History of an American Medium Tank by R.P. Hunnicutt: Presidio Press, 1978. The bible with lots of useful photos of 105mm Shermans and the POA tanks.

Armor In Korea. A Pictorial History by Jim Mesko, Squadron/Signal Publications, 1984. Photos of POA tanks from the USMC in Korea.

Tank Warfare In Korea, 1950-53 by Steven J. Zaloga, and George Balin, Concord Publications, 1994. Photos of several USMC POA and 105 tanks.

My Funny Valentine

Part deux



OR WHADDA YA KNOW? IT'S PLASTIC



More secret modeling stuff from Russia! This kind of thing is what we all hoped for when the Iron Curtain lifted, and sure enough, it's happening. From Saint Petersburg comes this injection molded kit of the early Valentine, to be followed soon by a Bishop! (Can we hope for an Archer, too?) So for those of you who like Brit tanks, don't like paying Accurate Armour and Cromwell prices, and are tired of building Tamiya Churchills and Matildas (when you can find 'em), and Italeri Crusaders—here you go.

The Valentine was a Vickers product, and according to Foss and McKenzie in *The Vickers Tanks*, the name had nothing to do with the candy and flowers holiday. The oft told tale being that this was the day the vehicle was proposed. Instead, the name is an acronym (for Vickers-Armstrongs Limited Newcastle on Tyne) and/or a tribute to Sir John Carden, Vickers AFV designer, whose middle

name was Valentine. Anyway, the prototype was produced in 1938, based on the A10 Cruiser, up armored by three tons.

The Valentine was the third infantry tank produced, after the Matildas (I and II), so is "Infantry Tank Mk III"; the Churchill is the Mk IV. The kit is the fourth production version, so it's an "Infantry Tank Mk III Valentine IV."

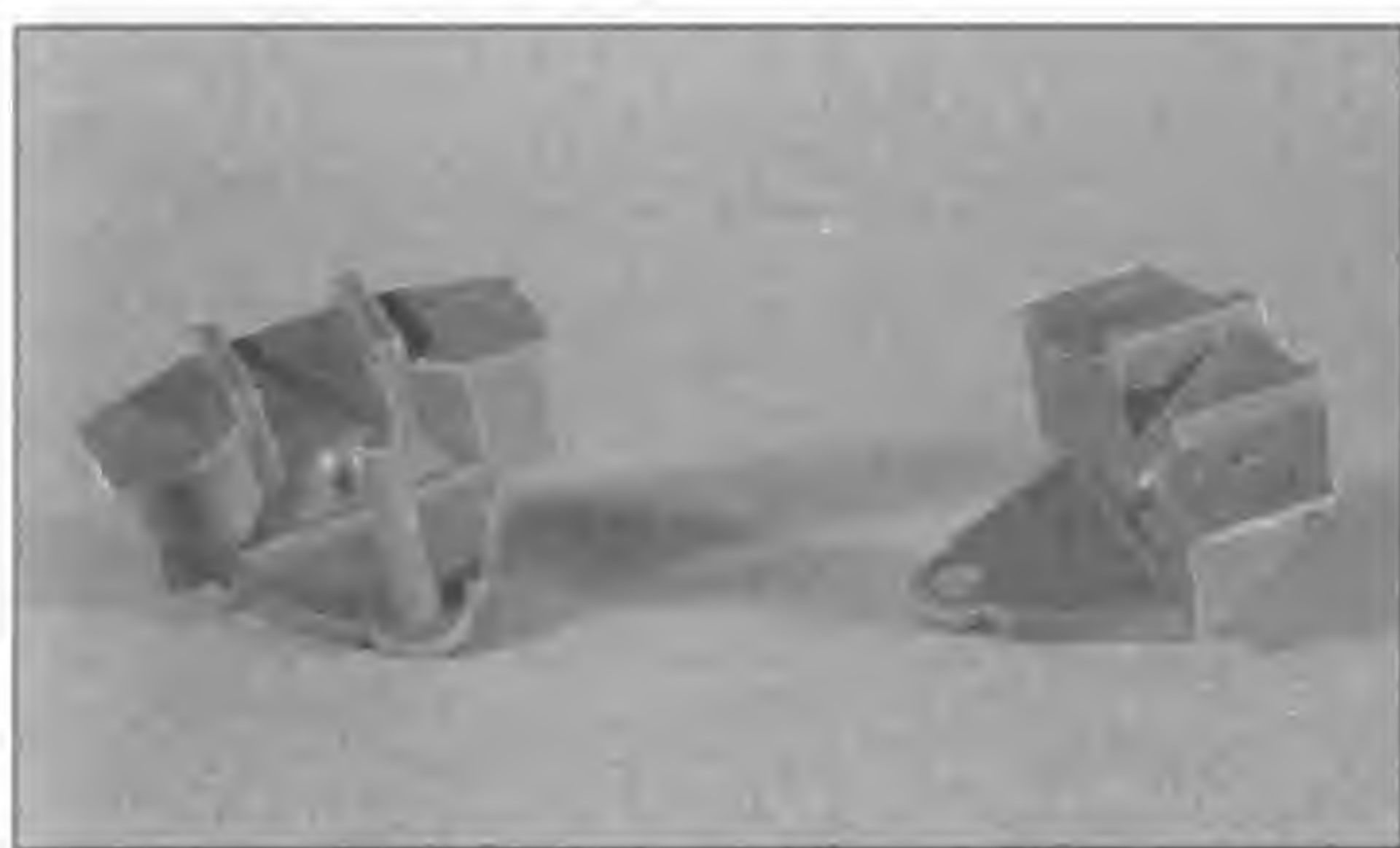
Fitted with an AEC diesel of 130hp (the IV used a more powerful GMC) and the standard early war armament of the 2 pounder (40mm) gun with a coaxial Besa machine gun, the Valentine entered full production in the UK in mid 1940 and in Canada less than a year later. By the end of the war more than 8,000 had been produced. In contrast to some other British tanks of this period, it was reliable, well armored (later marks were better armed, too, with 57mm and 75mm guns), and popular with its crews. The downside was that it was slow and had only a two man turret. The Valentine fought in all theaters

except Western Europe (and there as a "funny"); all but thirty of the Canadian and much of the British production went to the USSR as Lend-Lease.

Puttin' it all together

This kit is a throwback to the earlier injection molding days, with its heavy sprues and thick casting. There are some humongous sink marks to be fixed; this is no Tamiya kit. But at 25 bucks rather than 130, I think it's a fine kit, and Accurate Armour should buy the suspension units from these guys.

The hull went together with no major problems. There's a need for some putty on the rear, where parts 3, 21 and 22 mate to the upper hull. Keep the putty handy. The outside of the suspension units, parts 46, had the biggest sink marks I've seen in years, one on each side of the return roller mount. You'll have to fill these, as they will show. I used Squadron white putty; this doesn't have to be a glass smooth perfect job, since they're in deep shadow under the fenders.



Above: bummer...one of the bogie locating pins was broken off. (Well, it did come an awfully long way...) Below: here we have some major sink marks; I'd say these were in the sinkhole category!



I had another problem with part 46, the bogie locating pin that goes through parts 44/43 and into part 47 was broken off. I found a bit of plastic rod the same size (.080), cut it to length and glued it on. Hopefully boxed kits (mine was in a plastic bag) won't have this problem. Other than those two glitches, the suspension went very well; much easier and better than the AA units and they look just as good.

The method of mounting the suspension units is curious (but effective). There are long slots in the lower hull sides that mate with rectangular protrusions on the drive sprocket and idler mounts as well as suspension units and return roller mounts. This system was very stable, more so than pins. The downside was that the slots for the units were too long, leaving openings right under the fenders. I backed the openings with plastic sheet so light wouldn't come through; they're covered by the tracks so you don't need to fix them flush. If you fit the sand shields you don't have to do anything. Glue on the mounts for the drive sprockets and idlers, but don't put the sprockets and wheels on yet.

Then it was time for the tracks. For your \$25, you get individual track links. Some people will applaud, some will whine. (For you whiners, Accurate Armour will probably sell you a set of their tracks.) I found these to be pretty nice; there are no nasty sink marks to clean up, and the texture of the real cast stuff is well captured. Use a sharp knife to get 'em off the sprues, and there's not much cleanup. The mating surfaces on one side or the other need a quick swipe with an emery board. If you clean both surfaces, you won't have the advantage of a press fit for gluing. I built these the normal way; that

is a long run for the top (about 33 shoes), a shorter run for the bottom (about 26 shoes), shoes glued on the drive sprockets and idlers, and short runs (about 7 shoes) to connect the bottom runs to the sprockets and idlers. Put on parts 15 and 16, the fender skirts (or the sand shields, which the instructions don't even mention); the instructions would have you put these on before the tracks, which would be a mistake.

By the way, there was a minor problem with the tracks and drive sprockets. Either I didn't get the spacing on the shoes right, or VM didn't get the spacing of the teeth right. I had to cut off the teeth under the track. You could save the teeth and glue them through the openings in the tracks (difficult but possible), or put them under your pillow and hope for some kit money from the tooth fairy.

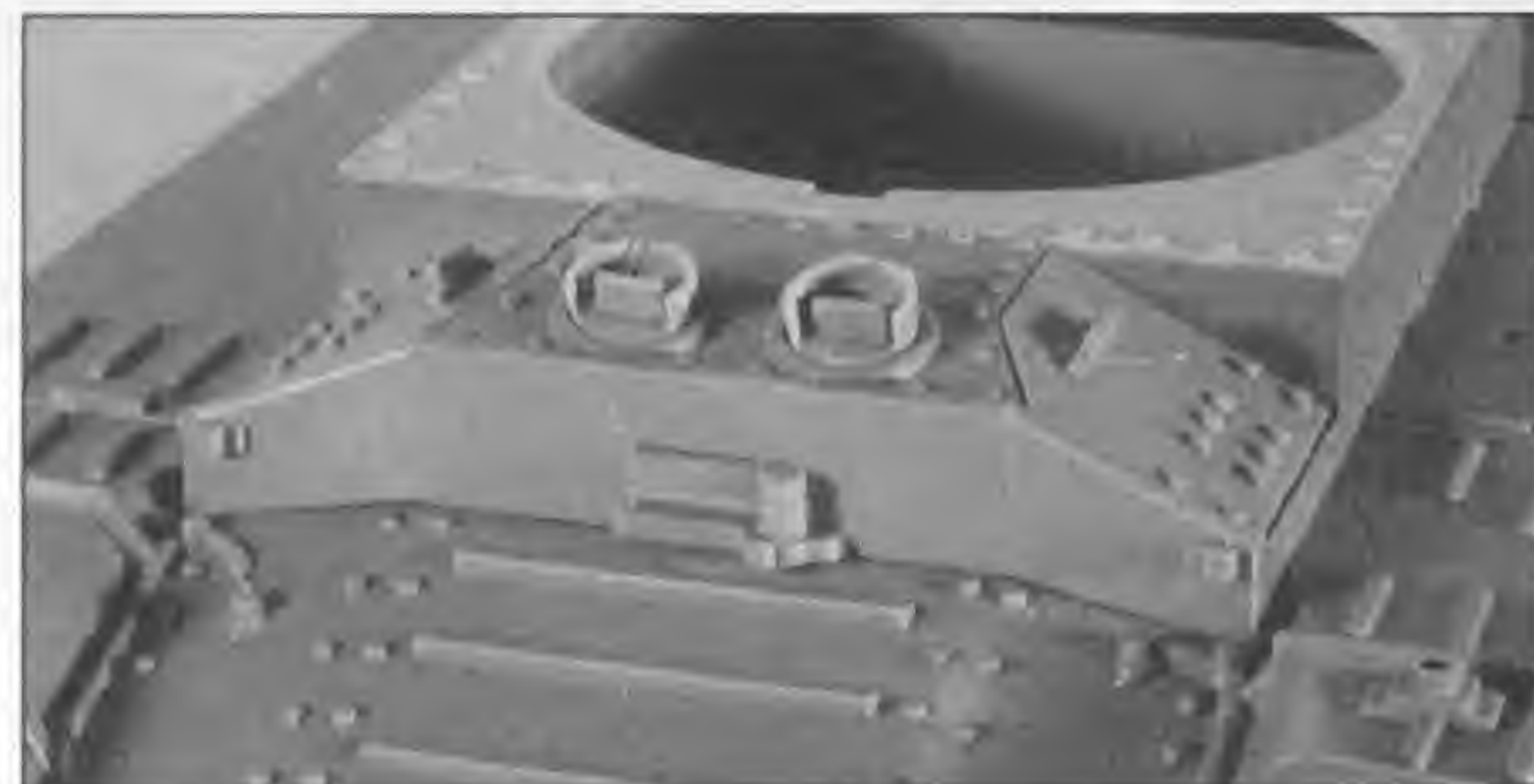
The rest of the upper hull can be done now. Because of the thick sprues and multiple attachments, take care and use some prior thought in the removal of the fine parts! I managed to get everything off and only broke two parts. One was a tow cable clevis, which isn't essential. The other was part 64, a headlight bracket, which I had to fix. Also be aware that the stowage box numbers are transposed. Put 'em on the way the pictures show. Two of the four periscopes had incomplete guards; I sanded down to the 'good' part, and then used these on the hull, where they're less visible than on the turret. The handles (parts 62) on the engine deck and rear hull plate are on the heavy side. They'd probably look better replaced with wire.

The turret posed no real difficulties. A bit of

Left above: here the suspension units are in place (note putty on sinkholes); I thought Accurate Armour should buy these units from VM to replace their woeful ones. Right above: drive sprocket assembly; it all fits together and works well. Below left: that separate turret ring area; this is so the same casting can be used for the Bishop.

Below right: two of the four periscopes had casting faults in their guards; I sanded down to the 'good' part, and used them on the hull instead of the more visible turret top.

Below l to r: turret top details; no machine gun is provided, although the mount (center rear; looks like a crank) is. The pistol port fit was generally good. Above and to the right is the direct sight, a bit heavy but provided.





Top left and right: rear details. Handles are a bit heavy for the scale; taillight is nicely done. Note the photo directly above the excess overhang on the rear fender. This accounts for the six scale inches of excess length; compare how tightly an AA Valentine's fenders fit.

Above left: front view; the headlight mounts were much the same as AA's white metal.

Left: the finished kit. The decals were scary, because of the large area of film inside the dotted lines. I sprayed the turret with gloss, used MicroSet, and got perfect results.

putty was needed on the back of the bustle. The numbers on the turret hatch were transposed, but dry fitting make this obvious. For British service the vehicle will need another antenna mount and antenna; apparently the Russian ones only carried one radio.


My main gun barrel had a couple of small sink marks in it, readily taken care of with putty.

Paint and markings

Since I already had a Valentine in desert markings, I thought I'd do this one as a Russian vehicle. I used Pactra dark green for the base coat, dry brushed with Pactra artillery olive. I was kinda worried about the markings, since they had a large clear area. I put a coat of clear gloss on the turret, let it dry for a couple days, then put the markings on with Micro Set. A day later, I sprayed again with clear flat, and the markings came out just perfect! Last I did the taillight in gloss red, and the periscopes in military blue (which is a blue-gray) with a coat of clear gloss.

That's that

This kit has got some problems, but at this price, I'd say deal with 'em. Strangely, the kit came out a little bit longer than the Accurate Armor one, but this is all in the rear fender configuration; every-

thing else matches right up. Measuring the kit shows it about six scale inches long, and right on in height and width. It looks OK, but putting it next to the AA kit shows the difference. Now let's have that Bishop! 

—Joe Morgan

MMiR RECCE

VM Valentine IV. Kit number???

We came buy this kit in a weird way. An Aeroflot pilot brings them in and then passes them on to us (for a couple of bucks). No number or even manufacturer was evident on the very beat-up box. The kit will eventually be released under a variety of labels. Squadron Mail Order will be importing them under their original label (whatever that is), DML will be offering it as part of its Imperial Series, number 9024. SMO and DML will also be doing the Bishop, with DML's being number 9025. Word has it that the kit will also be offered in Europe under either the Tom or Italeri labels. They're making it pretty easy aren't they? Either way, look for the kit to be a bargain at under \$25.00.

References

Chamberlain, Peter and Ellis, Chris, *British and American Tanks of World War II* (Arco, New York) 1969
Foss, Christopher and McKenzie, Peter, *The Vickers Tanks* (Patrick Stephens Ltd, Wellingborough, England) 1988

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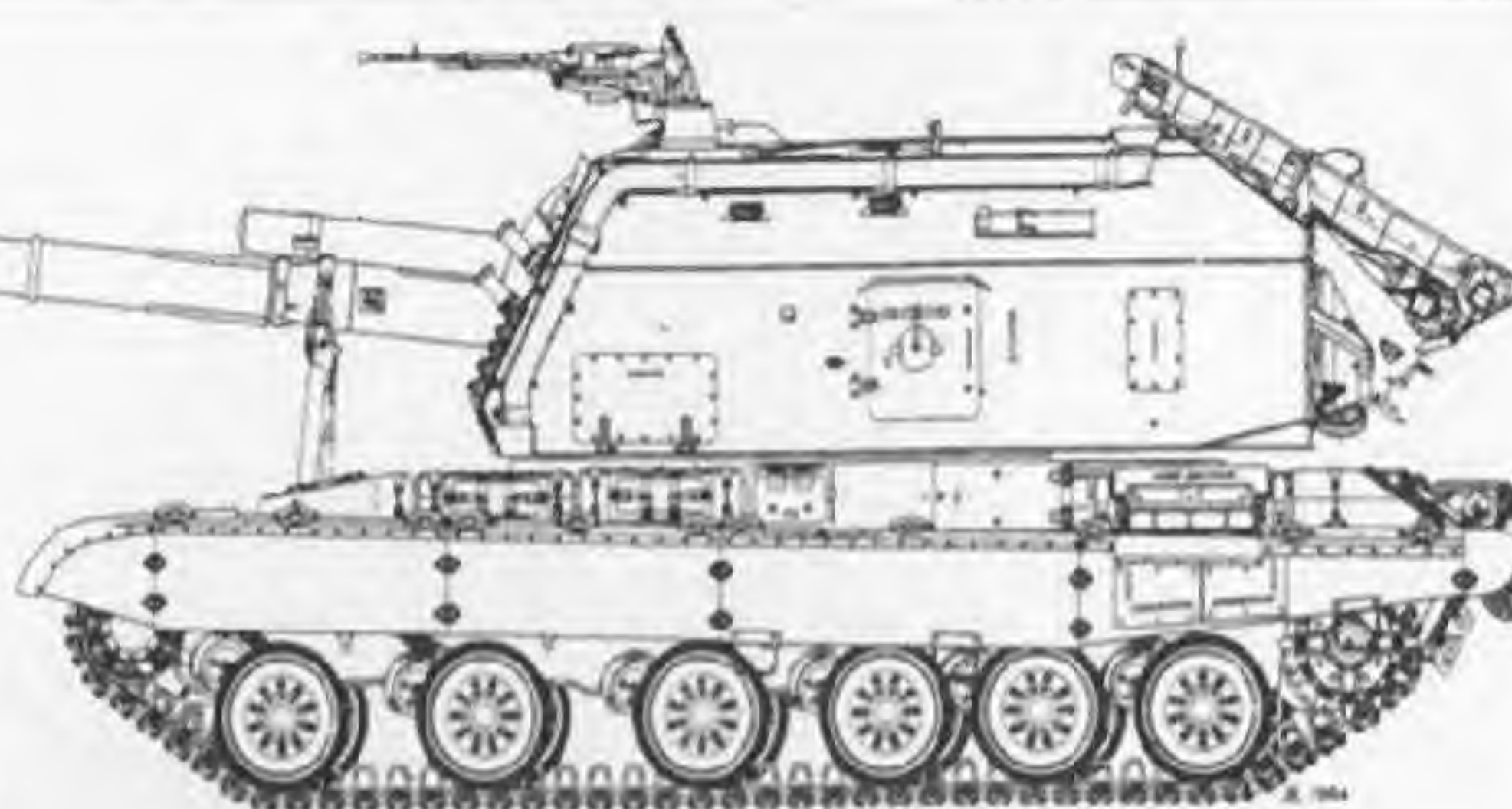
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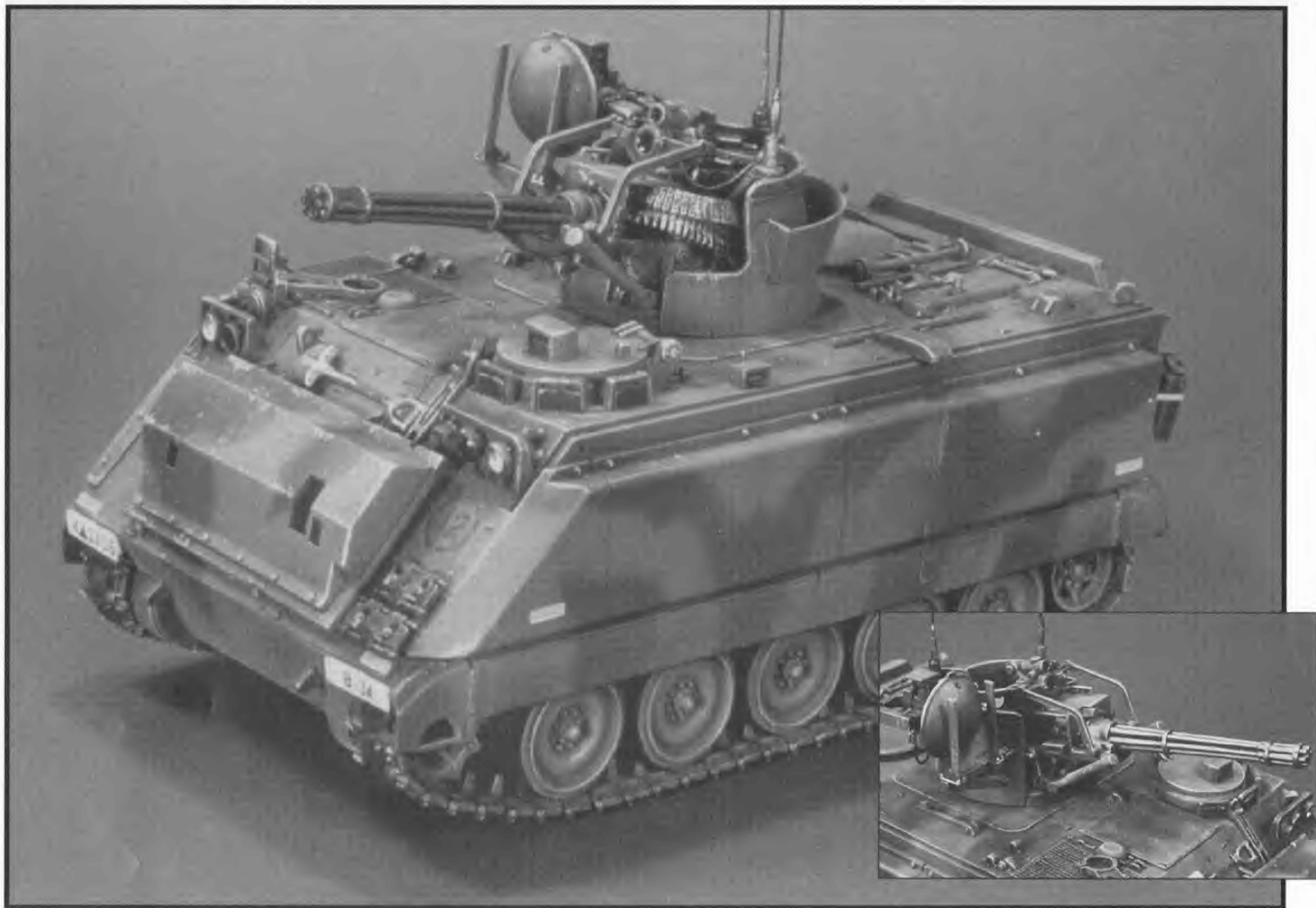
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A Trip to Planet Vulcan

Minicraft's
M163
buzz saw



The M163 Vulcan Air Defense System consists of the GE produced M168, a 20mm six-barreled cannon, mounted on a modified M113 chassis designated as M741. The M741 differs from the M113 in the configuration of the roof deck and interior compartment. It also provides a suspension lockout system for use when the gun is firing, as well as supplemental flotation cells on the front glacis and hull sides to compensate for the additional weight of the gun. This enables the vehicle to remain amphibious while crossing rivers.

Development of the M163 commenced in the early 60's. Late in 1968 a platoon of six test vehicles (designated XM163) were deployed to Vietnam for combat trials and were attached to 5/2nd Arty operating out of Long Binh. Although designed for anti-aircraft defense, only two of the six vehicles sported Range Only Radar. The Vulcan was used mainly for convoy escort and ground support duties. Their effect was devastating on soft targets. It was also used in this role during Desert Storm, where it took its toll of Iraqi supply vehicles.

The M163's ranging radar limits its operation to fair weather and daylight use only and has not proven suitable for use against modern jet attack aircraft.

We begin

The M163 has been previously attempted in mixed media by Peddinghaus and Verlinden, and in

plastic by Italeri. Academy/MiniCraft now joins the crowd by producing their own kit of the subject beautifully executed in plastic.

At first glance, the modeler might think that this is a re-hatch of the venerable old Tamiya M113 kit, but this is far from the truth. This is a newly tooled kit, molded in the now standard MiniCraft putty-colored styrene. Consisting of eight sprues, two of them for the individual molded track links, the kit is a combination of previous M113 kits by Academy/MiniCraft. The previously released M113A2 kit is used as the basic kit, but two additional sprues are added for the minigun, turret and other parts particular to the M163. The modeler benefits from the sharing of kit sprues by getting a ton of extra stuff for your spares box. For example: two .50 cal guns, ACAV gun shields, smoke mortars, rear mounted external fuel tanks, and a Milan launcher. This alone makes this kit a great value.

The molding and detail is very crisp, and the assembly straight forward. One negative comment, and don't let this influence you, is the considerable number of pin release marks present on the kit. Although located mostly on the inside surfaces, these are present on the rear ramp door, inside face of the trim vane, inside surfaces of hatches, and a couple of especially annoying ones on the very finely molded minigun parts. As it turns out, I didn't have to deal with most of these in the final assembled con-

figuration of the kit. It's just a matter of simple basic building skills to fill these in, but it is a little irritating. I wish MiniCraft had done better in this respect.

I deviated a bit from the assembly sequence shown in the kit's instructions. I assembled the entire basic hull, upper and lower, and on this I attached the detail parts, fenders, etc.

Hulla Baloo

No underside hull detail is provided and two very small holes must be filled in, as well as the MiniCraft logo, which I sanded off. Individual suspension arms are included which can be articulated if desired. The shock absorber units are simplified and molded integrally with the hull. It would have been nice if the shock absorbers were molded separately. On the positive side, once the wheels are attached and the fender/skirts added, they're not visible at all. Another thing which I was unimpressed with is the lack of detail in the inside face of the roadwheels. This is a common malady among armor kits, and again not readily distinguishable once assembled. Interior wheel face detail and separate molded shock absorber units are provided by Italeri in their M113 kits, if you want to swap them out.

I had no problems with the assembly of the lower hull. The roadwheels assemble in the same fashion as Tamiya road wheels, that is two roadwheel halves

sandwiching a soft nylon bushing. This allows the wheels to rotate and the only advantage I can think of for this is during the painting of the rubber wheels.

After assembling the roadwheels, I had some difficulty inserting some of them into the suspension arms. It seemed that the bushings were too small for the receiving pins in the suspension arms. A certain amount of pressure is required to push the wheels in. I broke off one suspension arm doing this. I solved the problem by using a sharp No. 11 blade and just enlarging the bushings. Watch out for this when assembling your wheels.

The kit comes with a full set of individual track links. I assembled the tracks by making a simple jig to help in their alignment. The jig consists of two pieces of Plastruct angle, super glued to a plastic card base. The angles were spaced the width of the track. I simply aligned the individual track links in the jig, all along using a small metal ruler to keep them flat. Once a long enough section was assembled, I ran liquid glue sparingly along its length and set it aside to dry. To create the curved sections on the drive sprocket and rear idler wheel, I formed them around each while the joints were still soft.

The tracks were formed in four sections, the two curved sections around the sprocket and idler wheel, and two long pieces for the top and bottom runs. I had no major problems during this part, the links connected beautifully. Once completed and painted, the sections were assembled and tacked on to the wheels with super glue. The only negative comment on the tracks is the fact that each individual link suffers from a sink mark on the outside track shoe. Because I had planned to build my model with the side fender skirts on, I only had to fill the sink marks on those sections of track that would be visible on either end. Had I wished to leave the skirts off, it would have been a significant effort to fill, sand and clean all of the sink marks on the top run.

I thinned the front fenders by shaving and sanding off the excess plastic from the back, to give them a more suitable scale appearance when the model is when viewed from the front.

What the hull?

Hull assembly is simplified from other M113 attempts by Tamiya and Italeri, since the rear hull is molded integrally with the hull sides. Assembly of the hull is a snap, the fit is excellent and very little clean up is required. I experienced some problems installing the engine hatch, it didn't seem to align very well with the hull, some minor tinkering with an X-acto fixed that.

The kit gives you the option of installing two externally mounted rear fuel tanks. My references for U.S. vehicles didn't show any M163 using these, especially Vietnam era M163's, so I left them off and saved them for my spares box. However, as modeling goes, you can never be too sure about these things, so check your references. Also, Part B19, the hull front, has locating marks for smoke mortars. None of my references show this vehicle with smoke mortars. I sanded the marks off and again saved those smoke mortars for my spares box. I expect that they'll come in handy for my future M901 Hammerhead project.

A very nice feature of the kit is the separately molded periscope guards in the driver's hatch area. Now, if they could only provide separately molded clear styrene periscopes (I know, I'm greedy). Also provided is a very finely molded protective guard for the exhaust stack (Part B41). This is very fragile, so be careful when removing it from the sprue.

For extra detailing, I added mesh to the engine

intake and exhaust grilles, and drilled out the personnel heater exhaust pipes. I also added styrene strip just at the point where the flotation cells join the front hull to replicate their attachment supports. I detailed the attachment bolts with a couple of Grandt Line bolts, too. I also replaced the kit's simplified fire extinguishing pull handle housing by shaving it off and replacing it with a spare Verlinden resin piece from their M901 conversion set. Please note that if you are modeling a Vietnam era M163, this housing was of a different configuration, so again, check your references.

Additional details added were MV lenses for the headlights, wire antennas (watch your fingers!) and lead foil straps for the Jerry cans.

No interior is provided for the kit. Since the M163/M113 vehicles incorporate lots of large hatches that can show the interior to full advantage, this would have been a nice addition. Any disappointment is tempered by the fact that, had an interior been included, it probably would have priced the kit a bit higher. Maybe an after market resin conversion manufacturer will be interested. The results would make a very attractive model. There's room here for improvement by brave scratch builders, too.

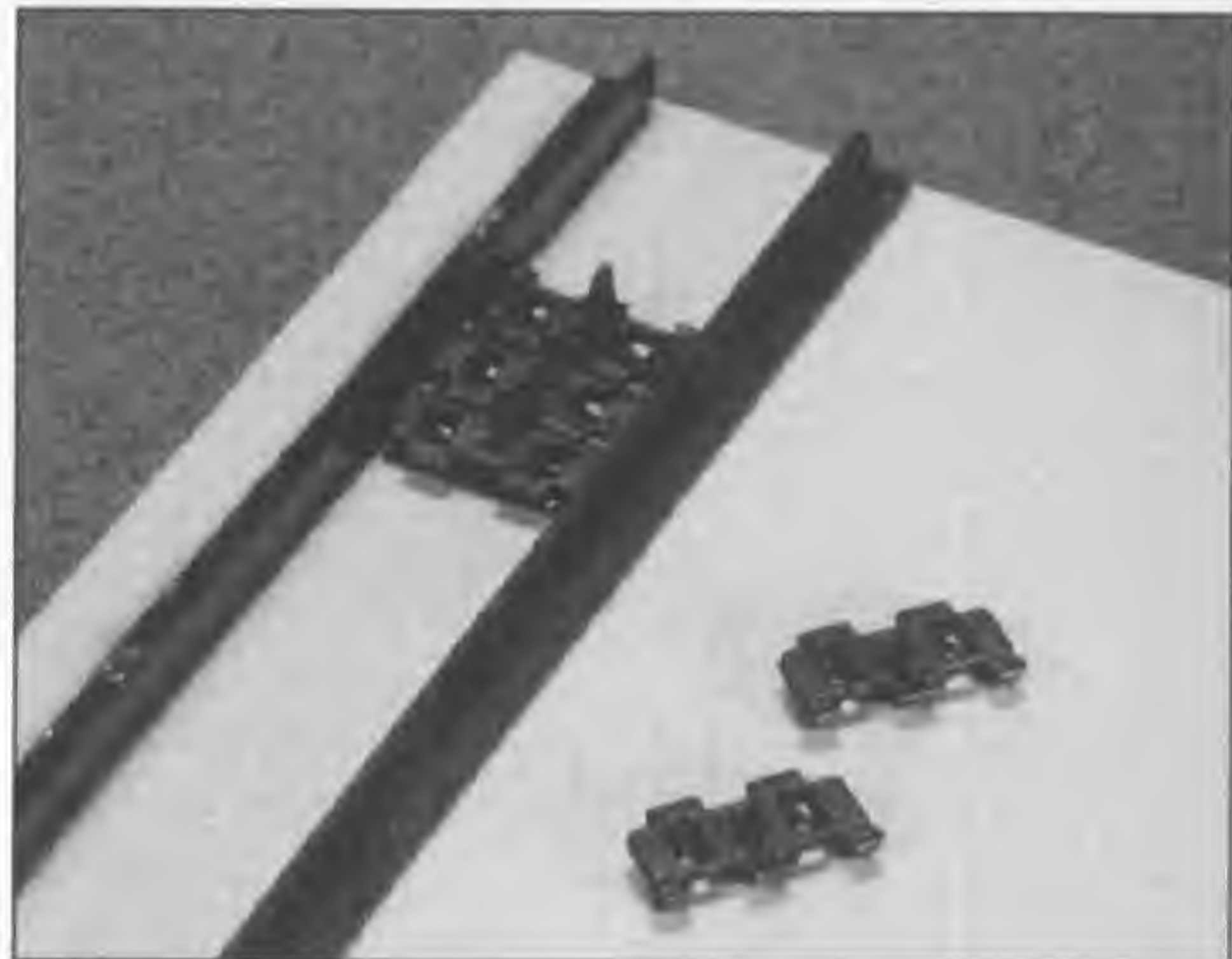
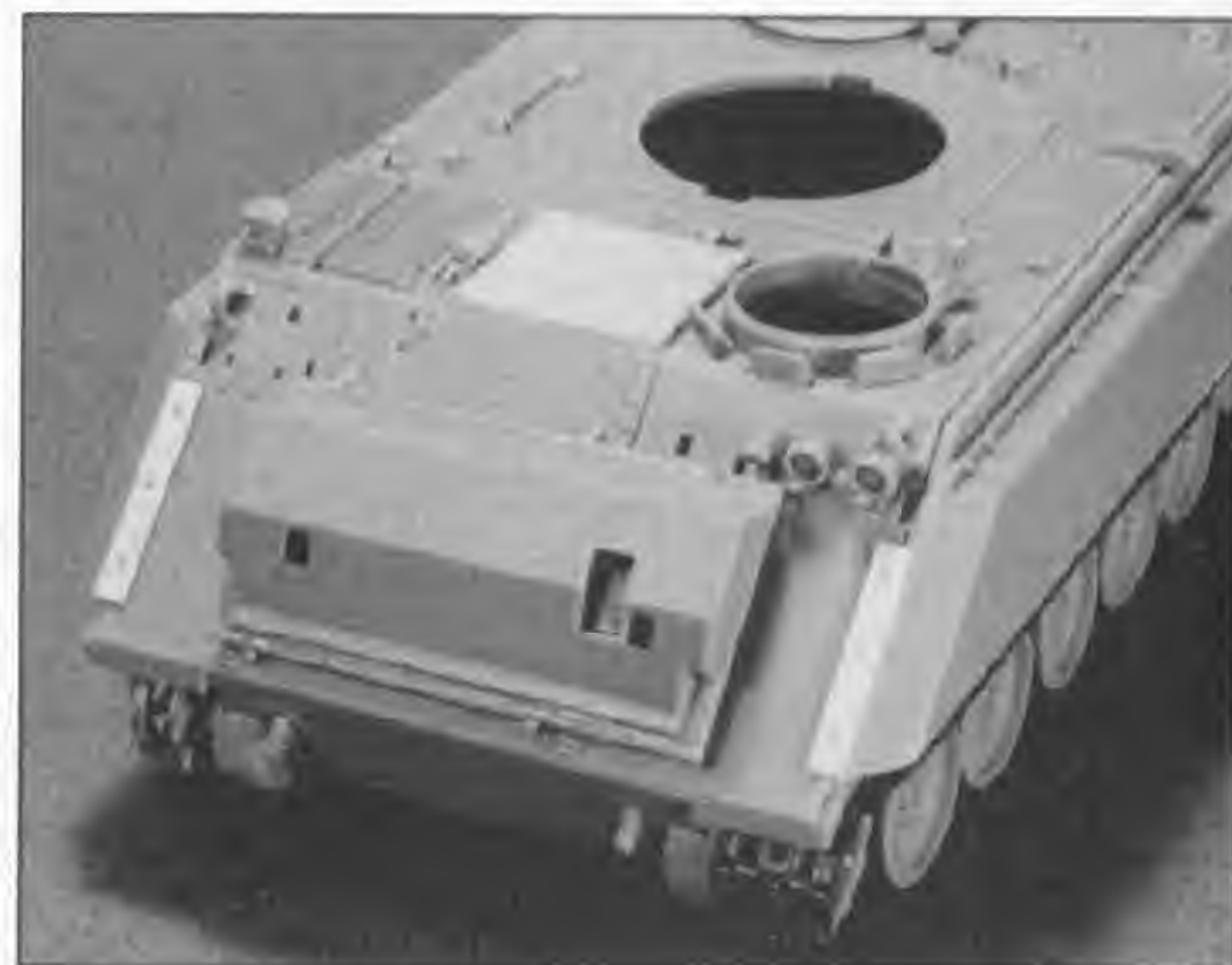
In case you want to display the driver's hatch open, or as a base for that lofty scratch building effort, consider using the interior from another MiniCraft M113 ACAV model, or from the Tamiya M113. Since my inclinations at the time didn't call for any of the above, I glued all the hatches and the rear ramp and door shut.

Don't mess with the Mini

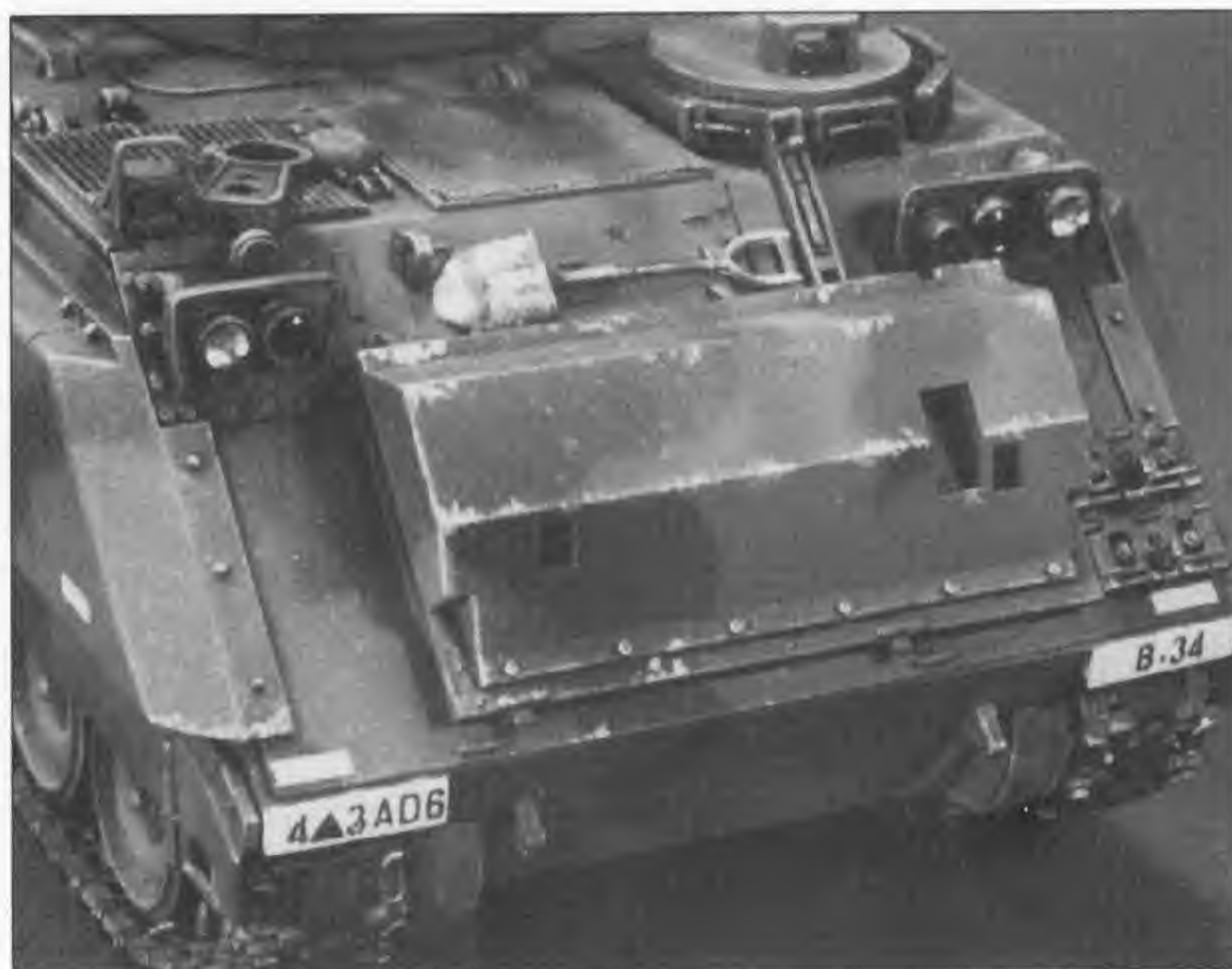
As you would guess, most of the instructions are devoted to the assembly of the minigun and its turret. This is clearly the major point of the kit. All in all there are no less than nine construction steps for its assembly. The turret assembly is comprised of three major elements: the minigun, the exterior mounted Doppler radar antenna assembly, and the turret proper—or M157A2 mount as it is officially named. The open turret of this kit is very nicely detailed and includes the radar receiver computer, radios, and other miscellaneous instrumentation. The super detailer can have a field day here. I added lead wires from the antenna mounts as well as cabling to and from the different instruments. I found the dual hand grip handles that control the gun poorly rendered. They could have provided a separate molded part here. I improved on the kit's by fashioning one from bits of sprue and a pair of .30 cal machine gun handles from my spares box.

I must digress here for a moment and recommend the Verlinden War Machines No. 9 book on the M113. References for this vehicle are not easy to come by, but this soft cover book, the second in a series on the M113 and its variants, proved indispensable for the assembly of this kit. It contains excellent color photographs as well as excerpts and diagrams from the M163 Technical Manual. Of great use are all the photographs of the turret and minigun area. It also contains several photographs of the interior of the vehicle, for those who might be interested in scratch building.

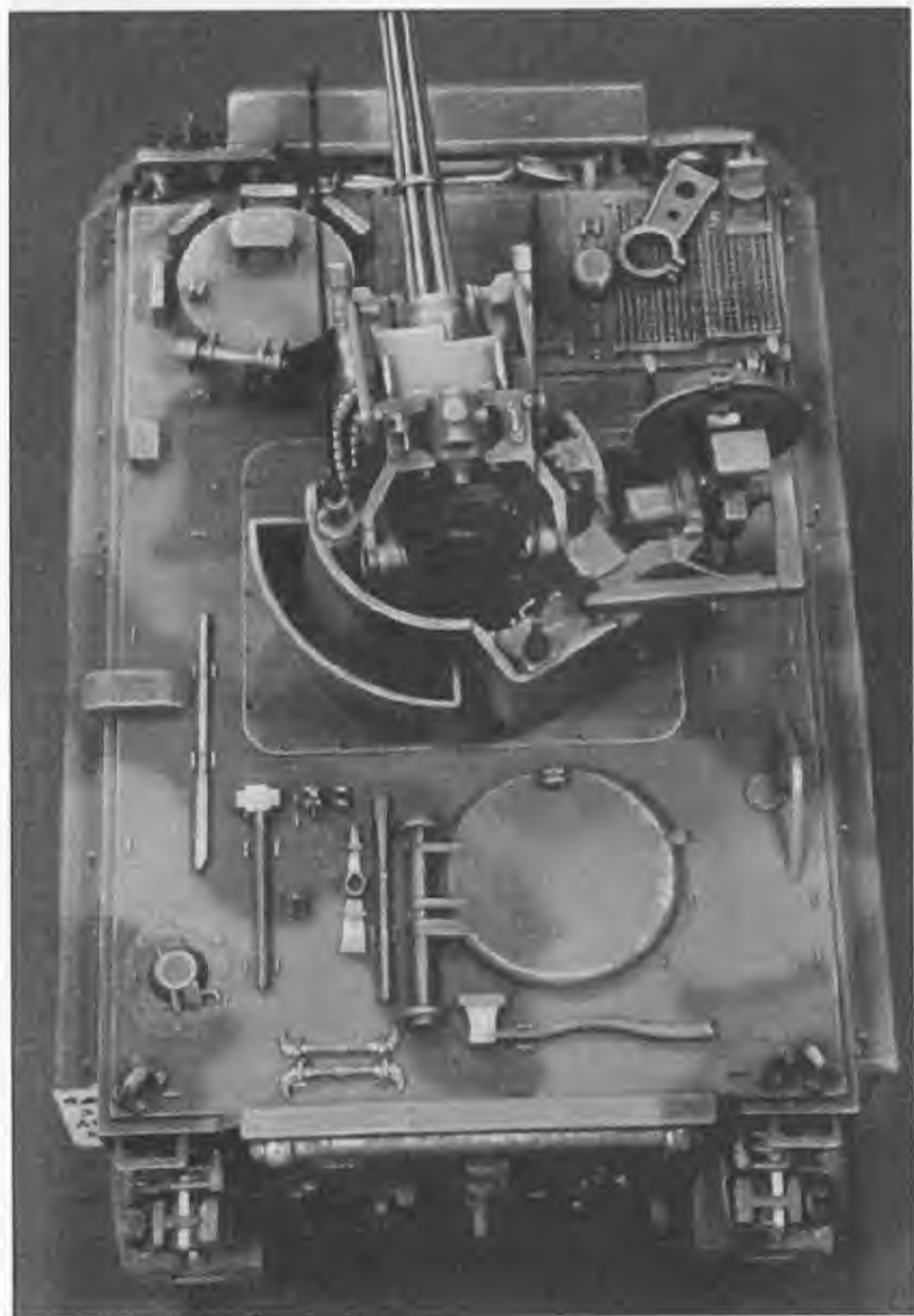
The minigun is, as you would have guessed, the jewel of the kit. This is where the MiniCraft model shines. They really did their homework here. The minigun assembly is very delicate and beautifully



From the top: my hull mods; the rigged jig; three views of the turret. Very nice detail. Note the vinyl ammo lines.



rendered. It assembles into an excellent representation of the real McCoy. The six gun barrels are made up of three sections, and once assembled, no



the rubber belts to the styrene gun. A note of advice: check your references when assembling these ammo feed lines. The instructions call for the wide belt (Part Y1) to be installed over the narrow belt (Part Y2). It was only after I had assembled the whole thing that I observed on the kit's box photos that the belts were installed in the reverse fashion—the narrow over the wide. Upon checking my references, my fears were confirmed: I had to undo everything and re-glue in the correct way. I'll live.

When compared to the references, the kit provided M61 gun sight is a bit on the small side. I would have replaced it with a scratch built one had time allowed. The only detailing I added to it was drilling out its lenses, painting them black and filling them with Micro Cristal Kleer to simulate glass. To improve on the kit's tracking radar assembly, I slightly modified the protective guard mounting (Part K12) on the turret shield and added some Grandt Line bolts to detail Part K15. I also added some wire on the back of the radar assembly (Parts K32 and K13), following my reference material. A note of warning here if you plan to model a Vietnam era M163. As mentioned before, not all of the M163's sent to Vietnam had tracking radars installed and those with radars used a different, earlier version than the one provided in the kit.

Painting & finishing touches

The kit provides you with marking schemes for two vehicles, one for a Vietnam era



The finished product. These shots show off my NATO paint scheme and some of the chipped metal highlights I applied with Testors aluminum. Check out those lenses in the shot at right.



mount, and another for a modern M163. I opted to build my version in the modern 3-color camouflage pattern, consisting of green, brown, and black, as depicted in one of my references. I used the new Polly Scale NATO Color paints. I sprayed the gun's barrel with Model Master buffing gunmetal, metalizer paint and buffed to a nice sheen. To replicate the worn spots on the M163 hull, I dry brushed with Testors aluminum.

When all this was dry, I shot the model with Dullcote and added a bit of powered pastel to the undercarriage and ramp to simulate dust.

The kit provides two figures with plenty of alternatives for you to build. Four different heads, two with tanker's helmets, one bareheaded, and one with options for a modern Kevlar helmet, boonie hat, or field cap. One figure sports modern BDU's, with a choice of four arm positions and an upper torso with T-shirt—dog tags showing, suitable for Vietnam. Two choices of legs are provided for this figure. A sitting figure, for the open turret is also provided. Both come complete with side holster. A full assortment of backpacks is thrown in for good measure.

Live long and prosper

Overall, I highly recommend this kit. It builds a very nice representation of the real thing, straight out of the box, without major fit or conversion problems. Only very minor and simple detailing is required to improve on it. I must admit that it was a pleasurable experience to build. I look forward to building other MiniCraft M113 versions.

—Jose Ramos

seams are shown. A separate gun end piece is provided for the muzzle end with pre-drilled muzzle holes, no twirling that X-acto here, man! Two sets of elevating hydraulic arms are provided. The modeler has the option to build the kit with the gun at an almost level position or at full elevation. I chose to model the later one. The adventuresome modeler could, with some minor surgery of the elevating arms and the travel lock, model the gun at full depression and stowed in the travel lock (you know you're out there).

The ammo feed lines for the gun are molded in soft vinyl which is very pliable and can be formed around the tight spaces of the turret and gun very easily. Assembly of the feed lines proved a bit tricky. I used super glue here to assure adhesion of

MMIR RECCE

Academy/Minicraft M163A1/A2 Vulcan Air Defense Artillery Gun. Kit number 1360. Kit graciously provided by Academy/Minicraft. Suggested retail \$30.00.

References

The following are all relatively inexpensive and easy to find:

Armor in Vietnam, A Pictorial History, by Jim Mesko Squadron/Signal Publications, Inc.

Modern American Armor Combat Vehicles of the United States Army Today, by Steven J. Zaloga and Lt. Col. James W. Loop.

Vietnam Tracks Armor in Battle, 1945-1975 By Simon Dustan.

M113 in Action, by Stephen Turnbridge Squadron/Signal Publications, Inc.

War Machines No. 9, M113 Part 2, by Willy Peters and Francois Verlinden. Verlinden Publications.

Look up in the sky! It's a bird! It's a plane! It's a tank? Yes, it's the...

Super Pershing



Late in WWII the U.S. Army fielded a single up-gunned Pershing tank to test the idea of a Tiger killer with a high velocity gun and superior armor. The MB Models conversion kit for the T26E4 Super Pershing looked to me to be a fast way to make this interesting tank. This assumption proved to be true, but I did end up scratch-building more than I bargained for. But first, some background.

The prototype Pershing T26E1, vehicle number 1, was used as the chassis and turret for the real conversion. The T26E1 differed slightly from the final T26E3, mainly in the turret which had different fittings and a split loader's hatch like a Sherman's. A T15E1 gun tube of 70 caliber was fitted to a modified turret and it fired a larger than standard 90mm round. The brass casing of the Super round was approximately 12.5 inches longer than the standard round used in the M36 tank destroyer, a fact which became important in the vehicle's brief fling in Europe. The number one T26E1 was registration number 30103292 and it was tested at Aberdeen, Maryland before being sent to Europe.

It arrived at the 3rd Armored Division rear echelon on March 15, 1945. Once in the European Theater it was found that the special gun sight developed for the tank was missing and it had to be replaced with a standard sight from the M36. The ammo didn't show up when expected either and was found a week later when someone got a call from the 635th Tank Destroyer Battalion asking

what the hell they were supposed to do with 90mm rounds that were 50 inches long!

The vehicle went through several armor upgrades in Europe and photos show it at two stages. I chose to do mine the way it appeared shortly after the mantlet and glacis armor plate was added and the vehicle was camouflaged. Most of the plating was taken from knocked-out Panthers. The second set of photos known, show it in a vehicle dump in June 1945, by which time it had more armor plate added to the turret and other field modifications. I didn't like what these late mods did for those first clean lines, so mine represents the Super in late April, 1945.

In either case, the T26E4 appeared too late for combat but it did get near to the front before the war ended. There were several other Super Pershings produced but they spent their lives in the US and ended up as targets. Apparently none of these unusual tanks were saved for us to look at now, so we only have the few pictures (best shown in Hunnicutt's book on the Pershing) which allow us to only see a few angles.

Some of what you have to do to the MB kit and the DML hull are in the realm of speculation for that reason. As for the latter kit, I chose to use the T26E3 titled Pershing because it most resembles the T26E1 hull and has the steel tracks the used by the Super.

Disguised as mild-mannered reporter...

The MB Super Pershing conversion kit is a mixed media set of mostly resin parts with a white

metal flash suppressor and a brass reinforced resin gun barrel. The resin turret comes in two halves and it has been nicely backdated to the T26E1 type. For some builders, this kit will be justified by this alone if price is no object. Back dating the DML turret is a lot of work and requires a scrounged up hatch from a Sherman kit.

The gun tube is longer than almost anything I've seen. The rest of the resin parts include the turret counter weight, the extra mantlet parts, the recuperating assembly for the roof, and the bow and the mantlet appliqué plates. I picked my way through them, liked some parts, found others wanting, and ended up using some while disposing of others. Hey—I'm a model builder!

Early on, I decided to show the hull's downward slope at the front caused by the extra weight of the long barrel. I spent some time measuring things and trying to figure out how much suspension droop to make. But it didn't matter since I got confused (hey—I'm a model builder!) and ended up just cutting the link of the front spring arm shackle, parts A3 and A4, in half. This change causes the position of the front road wheel axles to come up and that lowers the hull at the front.

Once the front road wheel arms were dry, I put on the rear-most suspension arms, followed by the four corner wheels and installed them temporarily with white glue. The rear arms were installed next in stock position but you have to check to make sure there is a straight run from the lowered front to the rear road wheels and that the whole tank sits flat



Down the slope. The Super takes a dive.

on all four. Once happy, I let the four corner arms dry thoroughly.

When I came back to the hull, I set the tank down on the four arms again after removing the wheels. I then added the intermediate suspension arms. The pin on each arm that goes into the hull has a flat edge for normal alignment but the ones

real tank had a removable end shield which does not appear on the kit so I had to make a stab at the correct place to cut the ends off. The drawing in Hunnicutt's book was helpful here. The third step was to remove the outer portion of the main fenders to leave only a scale inch protruding beyond the line made by the outer panels of the fender stowage

Superhull

The T26E1 hull had fenders made differently from the production Pershings. They were somewhat narrower than the T26E3's. The DML kit has good production style ones so I decided to modify them to get the right appearance. First I removed the front section along the molded groove that marks the diagonal joint separating the main fender from the front. At the rear, the

removable outer fender pieces which reduced the vehicle width slightly and made it easier to transport. The fender braces molded on the top of the kit fenders had to be shortened also and the ends changed to a vertical edge to match the photos.

When the fenders were built and dry they were then test fitted to the hull. I thinned the edges to get a crisp outer edge, then ground the tab off the under-

side where the center and rear halves come together. Since the Super didn't use fender skirts, this tab will show from the outside if you don't remove it.

The kit's fender stowage boxes are fine as they come but I added tie downs on the outer vertical panels. The front and rear boxes had two tie downs each and the middle box had four; the pattern not being the same as the production Pershing. I made the tie-downs by making a spacing template with styrene sheet and using it to locate and drill the holes. Then copper wire finished the job.

The last fender mods are to tackle the fender support rod/turnbuckles. The kit has fragile ones and once you make the kit into the Super you have to change these to fit the new fender shape and hull plate. So I cut the rod portion off each turnbuckle and replaced them with copper wire rod cut to make the lengths I needed. The rear turnbuckles mount higher

than the stock jobs and also act as retainers for the rear mounted track blocks. The front ones attach in the normal outboard fender location, but the inboard ends are attached to the top of the appliqué armor plate because the lift rings are not showing. For that reason I left them off until the appliqué was finished. I used small bits of styrene to make the mount tabs that the rod ends mount on, and these were drilled out to accept the bent tip of each rod end.

On the right front fender, I replaced the horn guard with strip styrene using two pieces to get the look of photo etched. The horn also got an electrical lead. I left the headlights off for now, and the front lift rings were not installed since it looks to me that the front appliqué requires them to be removed. The headlights on the real tank were moved to the top of the fenders so I added them after the front plate was installed. The front hull tow brackets from the kit were installed before the front plates because the lower plate sits on them. I didn't install the first aid kit box on the left rear fender top since the Super didn't have this feature. The rear intercom box that comes in the DML kit is a feature of production tanks only, so was thrown in my spares box for a future Sherman project.

The Super Pershing didn't have a travel lock as far as I can tell, but the last Super Pershings made did use one that was much larger than the stock (kit) lock. Not a problem since my subject didn't need it, but if you do a Stateside Super then you can modify the legs of the kit lock to get the right item.

Plate preferences

The MB kit comes with two resin plate assemblies to simulate the bow appliqué armor that was made from recovered German tank hull plate. In my opinion, they didn't capture the shape and angles of the actual parts. They were not Super, so to speak, so I made new ones. (Hey—I'm a model builder!)

My front plates were made from sheet styrene and the inner plates went on first. I made mine with the following dimensions: lower bow inner plate is 5.76cm x 1.4cm; upper bow inner plate is 5.76cm x 2.91cm. The upper plate has to have a large rectangular notch cut out of the right edge in order to allow the hull machine gun bulge to protrude through it. This is 1.63cm wide and the bottom edge of the hole is 0.91cm up from the front edge of the plate. The notch runs to the top of the plate.

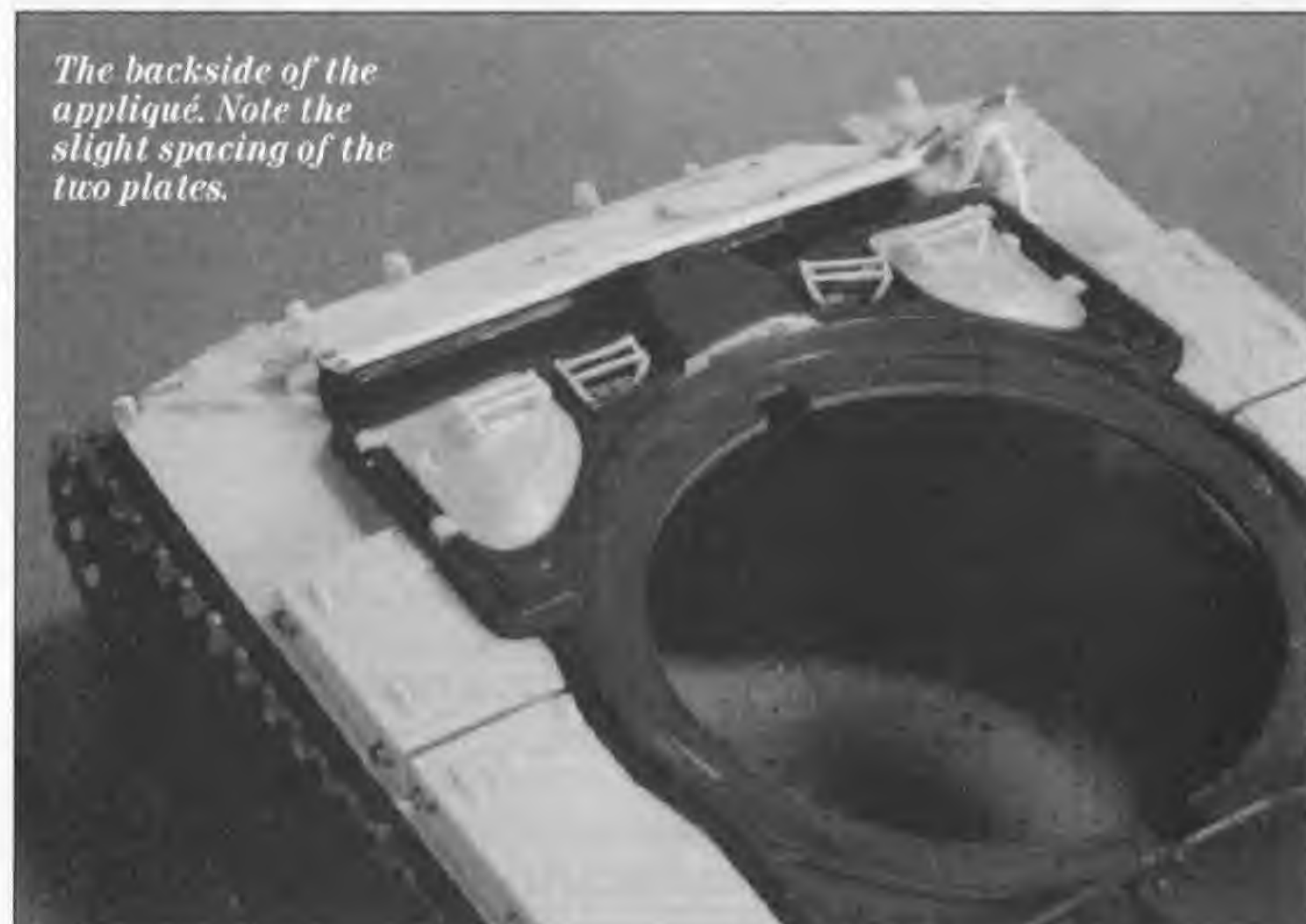
The upper bow inner plate also supports the inverted T-shaped upper bow outer plate, so that means it has to rest on the lower face of the ventilator blower bulge. I assumed from the angles in the photos that it rested on the front tow brackets also and was welded to the blower bulge where it makes contact. It was critical to get this plate in the right place because all the others keyed off of it. The bottom inner plate was welded to the front edge of the upper inner plate and to the thick bulges for the front suspension mounts. This will be obvious if you get the top plate on right, so test fit these things before you commit glueicide.

The outer plates are made from the same thickness sheet and are larger: the upper main outer plate is 2.97cm x 5.72cm; the bottom outer plate is 1.78cm x 5.77cm; and the T-shaped upper outer plate is made from a rectangle that started at 0.64cm x 5.72cm before cutting the sides to form the T. This layer of appliqué started by putting on the bottom one first and attaching it to the lower inner plate at the rear edge. I used a small temporary spacer at the front lip to keep it away from the inner plate since the Hunnicutt book photos show



My homemade appliqué plates

toward the front had to be filed slightly to permit the arms to lie flat on the table in correct alignment with the front and rear suspension arms. When you do this, make sure you look down the length of the hull to see that all the arms outer ends line up the way they should. Otherwise the wheels will stagger from one to the next. Patience is a virtue when doing this and some care will produce a straight set of tracks and wheels.



The backside of the appliqué. Note the slight spacing of the two plates.

these two plates are not in full contact at the middle but instead have about one inch or two of air space between them. While this dried, I worked on final shaping of the upper plates.

The large top outer plate has a weird shaped hole cut into the right edge that both lets the cal .30 stick out and lets the uppermost edge of the MG bulge stick through it. The bulge does not actually stick above the plane of the top of this plate because the cover plate has to lie flat on the outer plate. Think about it.

I mounted the outer plate and tried to get the spacing between it and the inner plate correct. Again, there is more room between the outer and inner plates at the front than my first look suggested.

If you look at the shape of the MG bulge cover plate on MB's part it came close to the real item, but the edge shape is not entirely right near the gun outlet hole. I got some idea of the shape of the hole in the larger outer plate from the cover plate's shape, and of course I left enough edge on the latter to support the cover plate. This odd-shaped plate was made from the same thickness sheet and has a half moon cutout in the bottom edge that forms the top of the outlet hole for the bow machine gun. The final plate piece I added was the T shaped one at the top that protected the ventilator bulge, and this mounted flat on the top of the inner plate. That gave it a different slope compared to the main outer plate. Also, the original had three prominent weld beads where it was welded to the main outer plate which I added with putty. Got it?

The details I added next were the tow ring under the lip joint of the outer plates and rectangular pads with towing brackets attached to the tops of them. These mount approximately in front of the ones on the kit hull and are made from styrene tabs with rounded edges and holes drilled through them. There are slight rectangular pads extending down the lower outer plate from these that I added with thin styrene as well. I then put the bow MG barrel on followed by another lift ring mounted crosswise in the center of the main upper outer plate.

The kit headlight mounts were shortened and put on top of the fenders leaving room to get the light fixtures on them. I made sure I knew where the fender support turnbuckles were going to go before installing the mounts. The light fixtures were hollowed out to accept MV lenses which I used to replace the headlights. I used MV #L116 for this size light fixture.

Faster than a speeding locomotive...

Unlike the hull plates, the MB turret is quite good, it is somewhat on the thick side, but hollow enough to get a crew peeking out of the hatches. I assembled it mostly as MB intended with changes made to the rear counterweight and the recuperating cylinders on the turret roof. I did discover that when rotated on the turret ring the MB turret hung up on both the engine bulge and ventilator bulge. A Dremel bit attacking the edge profile made quick work of this problem and the underneath was cut back some below the bustle.

The rear counterweight provided is fine except for the support gussets underneath it. There should only be four gussets (MB's has five) so I cut the MB ones off and made new ones from thick styrene. The kit gun mount was used followed by MB's mantlet. MB has already done the mods to the mantlet to receive the appliqué plate, and I did remove the two brackets at the top of the mantlet before installing. These are not up to the task of holding the recuperator tubes. I then put on the German derived mantlet plate after I reworked the edges of it to get the rough look of a flame cut.

The gun tube went on next. This piece is nice and straight due to a serious hunk of brass rod running smack dab down the middle. MB brought this



The turret under construction. Top inset: my added gussets. Bottom inset: sprocket mods.



kit out before the T26E3 version was released by DML, so the kit includes a white metal flash suppresser. The flash suppresser in the later DML kit is perfectly correct for the Super, so I attached that to the long gun tube.

I removed the raised "blade" sight mount from the roof since this was not on the real tank and interferes with the installation of the recuperators.

The next hassle came when I tried to use the MB kit's twin recuperator tubes. They are not long enough as supplied and the mounts are not up to my spec. (Hey—I'm a model builder!) My solution was to



The finished turret. I made the spare track brackets on the left side. The Super's were unique. The inset shows the finished recuperator mechanism. Cool huh?





Above left: the finished front end. The decals were scrounged from the spares box. The lights are MV model railroad items. Above right: the right side fenders. The narrow fenders were one of the features of the T26E1. Far l to r: the back side of the appliqué; the front turnbuckle; and the rear turnbuckle.

use the ends of the MB tubes, and after cutting them, I mounted them to the two spacer plates provided. I did not cut out the flash in the holes in the spacer plates so that the ends would have something to glue to. I then got (from my spares) two tubes of the same diameter, cut them to the right length, and mounted them between the spacer plates which gave me the total length I needed. The mounts for the piston rod ends of the recuperators should end up right next to the commander's cupola if you get the length correct. I then made new mantlet mount brackets with holes to simulate the pivot points and mounted these on each side of the recuperator tubes, gluing to the top right of the mantlet near where the MB ones were cut off. The resin mounts at the cupola end had to have some extra fiddly bits from my spares box to complete the installation. Not hard now that I've finished.

Final detailing commenced with the MB loader's hatches and the rest of the turret parts from DML's kit. The weather hood stowage rack on the right side, common to most Pershings, was removed from the tank before going to Europe so I used putty to simulate the small weld beads left on that side when the rack was removed from the real tank. The kit's rack was used as a guide for proper spacing of these blobs. Two lift rings at the top front of the turret were added next, one transverse on top of the gun mount rearward of the mantlet and one on the roof top in line with the tank's axis. I then added an antenna made from wire, and wire also worked as replacement grab handles for the turret hatches which are just molded on ribs otherwise. I drilled out the vision blocks on the commander's cupola before attaching it and filled in the holes later with Krystal Kleer followed when dry, with Tamiya Clear paint. The DML kit cal .50 machine gun is good enough for me and MB provides the short pintle needed.

Able to leap tall buildings...

The Super was camouflaged, but I started the scheme with dark olive-drab first, some of which was done in the middle of the assembly described above to insure a complete coating. The underside of the front plates and under the fenders can be tough to spray if you wait too long, so I painted these areas at the earliest opportunity as you can see from the photos.

If you look at the Hunnicutt photos, you can see that the olive drab was over painted sometime before it was photographed in Europe with a dark

color in a wavy pattern. The book photos show some of the details of this scheme on the gun tube and left side. There was precedence for this in the form of War Department instructions issued in 1943 regarding the camouflage of all US vehicles. It was probably more common than you'd think. Non-believers should check out Osprey Vanguard 39, *US Armour Camouflage and Markings 1917-45*.

Based on information in this book, I chose black as my second color. I ended up with a tank that looked like it fit into a lineup of NATO vehicles. Cool. Both colors were toned down later with dry-brushing extensively over the entire top surfaces.

The Super had only a few markings at this point so the decals I chose to add were the vehicle serial number and unit codes on the front hull plate and a single white ID star on the turret roof. The latter is a guess based on the assumption that this unusual tank would have been good P-47 bait if not properly identified from above. There are no published photos showing top markings so "do what you want" worked for me. When the decals were dry I over painted the tank with a good flat coat to dull everything down (mask those lights!) and then put the tracks on.

Before mounting the tracks I decided to fix two things about the drive sprockets. First I cut the mud release holes in the outer rim using a Dremel tool bit for this task. Lines drawn first using a home made template made the cut fairly easy. Next, I changed the kit sprocket teeth by cutting them off

and replacing them with a set of teeth from a Sherman. This step was necessary to back-date the sprockets, and I could have used the spare ones in an Italeri M4 kit but went with ones I cut off the sprocket hubs of an old Nichimo M4A1.

The kit tracks are great once you sweat them out. Lots of time spent here, most of it getting them lined up and trying not to end up a half a link to long or short. Doable but not for beginners I suppose. I painted them steel with a rust wash and then highlighted the wear points on the guide teeth and on the outer surfaces.

Fighting for Truth, Justice and...

The resulting Super Pershing is just what I had in mind when I started. The MB kit parts are a mixed bag but I feel they offer enough good things to make this kit the easy way to build a super Super Pershing. It is not going to be a good value to you if price is the only concern because many of the lesser parts are not well researched, but the turret parts, counter weight, gun barrel and mantlet armor are close to the real stuff and scratch building these would add a lot of time to an already involved conversion. So you be the judge. But keep in mind that I had a good time making this thing and all but the rookies out there can get the results you see here.

Holy Kryptonite Batman! ☺

—Pete Harlem

MMIR RECCE

MB Models Super Pershing Conversion Kit. Kit number 1118. Kit graciously provided by MB Models. Suggested retail \$29.95.

T-26E3 Heavy Tank. Kit number 6032. Suggested retail \$37.98.

References

Pershing, History of an American Medium Tank, by R.P. Hunnicutt, Feist Publications, 1971 (series now owned by Presidio Press). The bible with all the known photos of Super. Probably the single best reference source on the tank—ever. It contains not only the complete combat history of the Pershing, but also a highly detailed description of its development. It's been out of print for several years. A library might be your best bet. Hopefully Presidio will re-release it in the near future.

The M6 Heavy and M26 Pershing, by Robert J. Icks, Colonel AUS-Retired. AFV Weapons Profile 32. An oldie, but a goodie. This one goes back to 1971 and it has a very complete history and some nice photos. Also covers the variants, like the M45 assault tank. It's worth looking for. Had a couple of nice paintings of the Super.

Mini-Men

A Look at What's New on the Figure Front

DML

DML'S PENCHANT FOR THE DIFFERENT BRINGS US **German Ski Troops** (6039). The set is made up of 4 Gebirgsjäger all making their way through the snow in their own special way.

DML does the bonus thing again by throwing in a small photo-etched set representing the ski-pole baskets and a set of straps.

There really were no German Ski Troops per se, but rather all German mountain troops were required to be proficient in the use of both skis and snow shoes. (Lots of snow in those mountains, you know) These four plastic humans reflect this fact well, with three doing the slalom thing and the fourth trudging along with his webbed overshoes.

Other troops did use skis and snow shoes when they could get them. When the winter got deep on the Ostfront, it was the preferred method of locomotion. Check your references for some examples.

The clothing is an interesting mixture. Three of our snow-dudes wear the basic winter white camo over clothes. These were large loose fitting garments that were meant to be worn over other types of heavy clothing. They had no insulating value themselves. The garments were cut large enough to be worn right over equipment. Two of the figures are sculpted in just such a fashion and it's pulled off really well.

The fourth figure is dressing in the standard Gebirgsjäger "wind-suit" composed of a three pocket anorak pullover and pants. Both garments were reversible and he's depicted on the box top with the anorak white side out, but not the pants. The other side of these garments were a shade of grayish brown. This would be an interesting painting alternative.

Another interesting uniform item is the fur cap on the snow shoe guy. This was called a Pelzmütze and they were sometimes locally made, and both rabbit fur and sheep skin were used. Some of the rabbit fur was not a uniform solid color, but had darker stripes running through it. Try that for a unique paint job. The sheepskin caps tended to have a smoother, more uniform nap, while the rabbit fur was a bit more woolly looking.

The weapons are the correct combination of the Kar 98 and the Gew.33/40 carbine. The carbine was special issue to Gebirgsjäger and is the ex-Czech vz.16/33.

As to the purely plastic aspects of the set, it maintains that solid DML standard. Much of the parts are very cleverly designed so that the large bulky clothing appears to drape over what ever is underneath. This is most evident in the skiing guy. There are some large joints on this figure, but putty will fix them with no problem.

The crouching figure is a bit of challenge to go together. We used slow drying liquid glue, which gave plenty of time to monkey with all the parts. You will have to cut the ski poles in order to get them to appear as though they are passing through the figure's hands. The poles, by the way, as well as the skis themselves, are super delicate. Be careful removing them from the sprue. And try not to breath too hard on them once they're off. Each of the poles gets a sweet little

photo-etched basket that looks right on.

The walkin' cat has his skis slung over the shoulder and he gets a couple of photo-etched straps to help keep the skis together along with the baskets for his poles. We liked the way he was posed holding his rifle against his side.

The snow-shoed dude carries a carbine and is topped off with the fur cap. His snow shoes are molded with their supporting mesh solid, but all you real übermodelers out there would have no trouble making a new mesh from wire.

We thought all these figures were excellent and due to their unique subject matter, they all would make interesting stand-alone projects if carefully constructed and painted.

There's no one single reference on ski-troops, but winter clothing items can be seen in a number of different uniform books. There is also good coverage of Gebirgsjäger uniforms in the Militaria title; *German Soldiers of World War Two*. Let's hit the slopes!

Hey pardner, how'd you like to buy a couple of good little ponies? Well Giddy-Up, 'cause we've got two fillies of the styrene kind, with two SS nastys thrown in to boot with **8th SS Cavalry Division 'Florian Geyer'** (6046).

This is the first mounted set to come along the trail in 1/35th for some time. Tamiya had their party of one back in the seventies, along with their famous horse-drawn field kitchen. The Italian company ESCI provided us with two identical teams in their horse-drawn transport set of the same time. Both sets were so-so, with the Tamiya one being the poorest

The DML horseys get us into the nineties with all the detail and fidelity we've come to expect from them. These are even better than the ESCI offerings.

The theme for this set is the 8th SS Cavalry Division, Florian Geyer. Florian Geyer was not a particularly nice bunch of guys, being suspected of numerous atrocities during their fling on the Eastern Front. The division was formed in 1942 from one of the original Totenkopf brigades which saw "security duty" behind the front lines in Russia. Security duty



Ski Troops



'Florian Geyer'



'Florian Geyer'

in this context usually meant providing muscle to the local SS and police leaders for their relentless persecution of the local folks. They saw a little front line combat in '42, were they served under the command of the 9th Army in Army Group Center. In this capacity the troops were probably

continued on page 59



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Marine Recon

A good, inexpensive reference is the Osprey Men-at-Arms Number 234; *German Combat Equipments 1939-45*. It contains an excellent and comprehensive description of German cavalry equipment. More good Volstad illustrations too.

The latest in the 'nam series from DML is **Marine Recon** (3313), a set of jarhead recon

used as reconnaissance or scouting elements.

They continued to practice their craft through the remainder of the war, pulling anti-partisan duty in Yugoslavia and were finally annihilated in the fall of Budapest, Hungary.

Although there were only a few SS cavalry units, the Army made extensive use of their cavalry formations. This was especially true in the Polish and French campaigns. German cavalry traditions go way, way back. It was the Totenkopf Death's Head Hussars that provided the inspiration for the uniform and insignia of the new Panzer units.

But back to our plastic ponies. Even though our subjects are resplendent in the latest in SS fashion, what's underneath is basic Army issue horse furniture. Both wear the camo smock depicted on the box in the spring pattern (you've got several other choices). One has a stahlhelm, while the other is capped with the standard SS reversible camo cover. This had spring colors on the outside and fall on the inside. This was sometimes called a Bergmütze after a similar cap worn by Gebirgsjäger. It was normally worn without badges or insignia. So don't mistake this for a M43 cap.

From the waist down it's also pretty much the standard German kit. Mounted hoppers wore their gear a little differently than their walking comrades. The bread bag and spade were eliminated from the belt and the canteen was shifted to the center of the back to keep it from banging against the rider's thigh.

There was a variety of special items for cavalry troops, but we'll only discuss those that are provided in the set. (Hey, it's only 64 pages) Troopers always carried at least a blanket roll and saddle bags and each of our cowboys are so equipped. There were four different types of saddle bags issued during the war and these appear to be one of the more popular types, the model M1934.

In constructing your little beasts, you will have a few more seams to fill than usual. There are some major ones around the neck and chest areas. Cool little photo-etched stirrups are supplied, but oddly the etched set does not include the bridle loops, which would have seemed logical. You'll also have to come up with the straps for the bridle and those for the stirrups as well. This is no big deal. Use some lead foil for that nice thick look of leather.

One of the horses is literally "champing at the bit" and even his teeth are rendered on the model.

Our favorite feature of the set was the compatibility of the waist down gear with other German wartime cavalry units. Our heads are spinning at the thought of all those conversion projects.

Two different poses are rendered with the horses, one standing and the other walking. This also adds to the conversion potential. Dust off those old Historex horse conversion articles and be prepared to saw!

in the jungle taking some heat. Like the others it's a four-figure set with a radio operator, 2 riflemen and a M79 gunner.

The RTO comes with what looks like a PRC 25 or 77 radio set. Some of the smaller bits are missing here and will have to be added for accuracy like the whip antenna and the handset cord. The figure does include the correct spare parts bag and frame. Overall the fit was good, but don't even think about trying to get the hand with the headset near the head without doing major work. The RTO carries a nicely done M-45 submachine gun. Be careful with the stock, it's very delicate. He not wearing his "cover," and actually he looks like he needs a haircut. Kinda shaggy for a jarhead, but since he's in the bush...

The first rifleman carries an M16 with the silencer installed. The figure has a lot of diorama potential. He could be used kneeling next to a wounded GI giving first aid. Just a thought. Fit here is very good. The M16 fits right into the shoulder but you will need to cut off the pistol grip to get it to fit in the hand. Care must be taken when sanding the seam line on the silencer since the connection to M16 is very small and easy to break.

Like the others he humps a full combat load, with 4 ammo pouches, 4 frags, 1 K-bar, 2 canteens, 7 pouch bandolier and a first aid pouch. Make sure you put the ammo pouches and grenades on the web belt before you glue on the bandolier. His headgear is a boonie hat slung around his neck and laying on his back. No chin strap is provided but the hat is nice. It even has the ribbing on a commendably thin brim.

The M79 Gunner is shown with his weapon broken down, loading a round. The gun comes in two pieces, the stock and barrel. The weapon is very nice and shows how far DML has come with its weapons. Two 6-round grenade bandoliers are provided but the fit is a little tricky because you still have to position the arms to be able to hold the weapon properly. Also included is the usual first-aid pouch, 2 canteens, one ammo pouch with 1 frag and 1 smoke grenade on his right hip. Surprisingly, no .45 cal pistol is provided. Most M79 grenadiers carried a .45 cal for close in combat. There's an extra K-bar for him since 3 come with the set and only two are shown on the box instructions. The figure is provided with no headgear except for his OD head-band. So Dion Sanders didn't really start this fashion trend after all...

The second rifleman is just your garden variety pose. On the box top he's shown crouching behind a tree. If there's fire coming in he'd better grab some ground like his buddies! He's provided with lots of ammo with 4 regular pouches and a 7-pouch bandolier. We couldn't get both the bandolier and the left side ammo pouches on and still get the arms to fit. We ended up leaving off the two left ammo pouches and 2 frags. We also left off one frag on the right for same reason.

All in all not too bad a set and an excellent addition to the growing line of 'Nam figures from DML. They don't release these fast enough for us. We look forward to the ARVN and Mule set due out soon.

In the further adventures of the inhabitants of Planet 1/16th, comes **British Airborne 'Red Devil' (Arnhem)** (1606). The latest in the series is a soldier from the famous "Bridge Too Far" battles of the Arnhem corridor.

Overall, he represents the standard Para gear seen from Normandy onwards. He's wearing the Denison jump smock, with battledress underneath (or a pink tu-tu for all we know), boots and gaiters. He's armed with the Mark V Sten gun. Like all the previous 1/16 figures he's based on an earlier 1/35th set.

Another great piece of plastic from DML. Good crisp molding throughout. Excellent detail is evident all over this bloke. There is stitching detail in the smock as well as a concise rendition of the zipper. The scrim scarf detail is also picked out nicely as are the three different patch insignia worn. He's complete with mustache and even his teeth are present. Good show chaps!



DML Para

There were no problems encountered during construction with the exception of the left arm. We could never get it lined up with the Sten. The box top shows our man gripping the gun by its magazine, but this was difficult to accomplish without some major trimming of the arm joint and the right side ammo pouch. You can do it though.

We found his battle dress trousers on the skinny side. These were usually quite baggy, and photos of the Arnhem battles often show the left hand pocket bulging with cartridges and grenades. Not a problem for Puttyman.

As in all the previous biggies, the rendering of the weapon is out of this world. Really superb stuff. It makes you want to yank that bolt back and go look for some Germans...

For excellent reference (and you'll really put it to good use with all this detail) see the Militaria title: *Soldiers of D-Day*. This is an English language

compilation of the very hard to find French language *Berets Rouges En Normandie*. This was a Militaria special issue published some years ago. It and the current edition are crammed with full color photos of every single piece of British Para gear from WWII. If this is your area, grab it. More general, but also good, is Osprey Elite Series Number 1, *The Paras, British Airborne Forces 1940-1984*.

We're also going to whine again about the possibility of more than one figure in the box. There are so many dio ideas with this one figure, would four cost more than a full armor kit? We'd definitely pay thirty-five to forty dollars for something like that. Think of it, that's about the cost of ONE resin figure in the same scale. (We can dream can't we?)

The Verlinden Corp.

OFF THE TOP OF THE VERLINDEN BARREL ARE FOUR NEW releases. Here we look at two in 1/35th scale and two in 120mm.

The first of the 35th scales is listed as plain 'ol **German Infantryman Eastern Front** (VP1098). What you get are two spuds in winter duds, although not much pins them firmly to the Ostfront. One wears the 1942 fur cap (is this a trend or what?) and felt boots called Filzstiel by the Germans. These are more typical to the Eastern theater, but still might be found in the Ardennes battles for instance. It wasn't uncommon to see the tops of these boots covered by the baggy reversible snow trousers. This may be the case with the second figure. His boots look about the right size, but his pants are sculpted covering the tops. When painting, don't forget that the felt boot lowers were made from a reddish brown leather rather than the black leather of the jackboot.

The winter garb of these two is the standard Army parka and trousers introduced in the fall of 1943. They were reversible from the white and the most common flip-side was "Zeltbahn" pattern camo. It was later manufactured to Waffen SS specifications and found in a variety of their patterns as well.

Brand new, they were a kind of bone-color, but after a few days of combat, they became all manner of dingy gray and brown tones. This garment was only issued to front line units, so you'd probably never see them "pretty."

Both our guys come prepared with potato masher grenades tucked in their belts and the appropriate ammo pouches for their respective weapons (Kar 98 and MP40 in this case).

What we really liked about these two was their size. They're a bit on the short side, which is perfect for showing a bit of diversity in the stature of your mini-men or mixing them with other manufacturer's figures.

Another unique feature is that one of the heads is sculpted with a smile on its face. These are sometimes hard to find and can be useful for dioramas where the main theme is a humorous one.

The second set is titled "**This Way**" (VP1100) and is two GIs that are meant to be posed on top of a Sherman. One cat is an infantryman gesturing at a map, while the other is the tank's commander, who's taking it all in.

The infantryman is decked out in the M43 jacket and boots which would put him into the later part of the war. He's depicted wearing a full set of web gear, but carries no equipment. (Sounds like an officer to us) This area of the figure is very well executed. He's got a ring of cartridge pouches around his belt, but no weapon is provided. (It's next to the tank!)

The tank commander is pretty standard stuff. It's only a half figure for stickin' in a hatch, but what you can see is the tanker's overalls and jacket. His lid is the



German Infantryman

tanker's "football" helmet. More nice rendering around the stand-up collar and scarf.

The two 120mm offerings are a couple of Teutonic tough guys. The first is **German MG Gunner WWII** (VP1085). He's spiffed out in the above mentioned snow suit, fur cap and felt boots. (We told you it was a trend!)

He's slinging a beautifully detailed MG 42, complete with bipod and ammo canister. There's a bunch of extra gear provided for his gig in the form of an open ammo box, a closed one and a spare barrel container. A couple of grenades and a P38 hard shell holster complete his tasteful ensemble.

The sculpting really makes the point here and the baggy, sloppy appearance of the snow suit is captured quite well. His face is interesting too. It's a puss only a mother could love—this guy's oogly!

With the extra gear you have a few options. The helmet is a separate piece, so if fur hats are not your desire, lop it off and add the helmet. He could also be displayed in a trench or revetment getting ready to set up shop.

Our next contestant is probably the most famous subject in all of miniature figuredom. He is **German SS Schütze Ardennes - 1944** (VP1091) and he represents one of several Grenadiers pictured pilfering through an American column during the opening phases of the Ardennes offensive.



'This Way'

He certainly is an interesting choice. He stars in a famous film clip staged by German Kriegsberichters just outside of the small town of Poteau, Belgium. A column of American jeeps, half-tracks and armored cars has just been attacked and hastily abandoned, and several Waffen SS and at least a couple of Fallschirmjäger enjoy liberated packs of Lucky Strike cigarettes amid the wreckage.

Of all the soldiers pictured, our man has the most unusual outfit. Starting with the obvious, he wears his stahlhelm over a Kopfschützer, which was the German version of a Balaclava, or "toque" if you hail from the Great White North.

He wears the basic fall pattern SS camo smock under a mysterious cape-like garment. No such animal was in the SS clothing zoo at the time, so its origin is just a guess. Our speculation is that it's a section of an American waterproof poncho or raincoat, customized on the spot with a sharp trench knife.

The figure superbly reflects all the detail of the photos, including that trench knife which is clipped to the inside of the cape. Mr. Schütze is an MG 42 gunner by trade and the ammo belt around his neck is rendered to a T.



German MG Gunner

The rest of his equipment is a P38 holster, a bare spade stuffed in his belt and a 9mm Browning High Power pistol. This is not a .45, although it's a logical mistake considering where he's standing. The Browning was manufactured by Fabrique Nationale of Belgium for use in several countries before the war. Afterwards it continued production, mostly for the Waffen SS.

If you care, the model does look a bit more like a .45 and you can alter it by narrowing the barrel along the sides about two scale inches from the front end.

The resin Mr. Schütze is sculpted with straight pants hanging out of half boots. These could be painted as camo pants or just left field gray.

Close examination of the photos in After the Battle's *The Battle of the Bulge* sheds much light on the vitals of who they have dubbed "SS-Schütze X." Through their meticulous research they have identified the men as being from 2. Kompanie, I. Bataillon, SS-Pz.Gren.Rgt 1. (You weren't dying to know that?)



SS Schütze

The most interesting thing the photos reveal is that in one shot it appears Schütze X is wearing GI issue waterproof trousers and M43 shoe packs. It's tough to make out, so we don't fault Verlinden for missing it, but it makes for a fascinating combination of uniform items. In another shot, he's also back together with his MG42. This would be a great super detailing project, maybe you could borrow the MG 42 from the previous guy? Although we don't know where you'll find those shoe packs. Good resin fun.

Anyone wishing to embark upon this journey should be armed with *The Battle of the Bulge, Then and Now* by Jean Paul Pallud. The budget-minded can get a smaller dose with the Osprey-Elite Series number 11; *Ardennes 1944: Peiper and Skorzeny*.

Warriors

THEY KEEP ON CRANKING THEM OUT, SO... HERE'S MORE STUFF.

Warriors has been kind enough to supply us with a nice selection of color photos of their figures built and painted. We've shown a few here and although they are not in color, we thought they'd be a welcome change from our boring unpainted examples.

The first up is titled **Dazed & Confused** (35014) and he's based on a painting from the back cover of the old Squadron Signal German Infantry in Action. (Whadda mean it was thirteen years ago?) There and in resin, he's seen covered with a Zeltbahn shelter quarter. That's basically all there is to the guy. Boots and gaiters place him in the post '43 period, but he could be either SS or Wehrmacht. Both utilized the shelter quarter in this fashion. The cuff title is about all you need to remove if you want plain jane Wehrmacht. A nice Kar 98 and potato masher necklace round out his gear.

The shelter quarter is well done, but it could be a touch longer. You could swap out the helmet with a bare one if you want it closer to the illustration. It shows a stahlhelm covered with chicken wire and leaves for camo. We dare ya.

Next is **Waffen SS Grenadier** (35016), and he's another snapshot from a Volstad illustration in Squadron's *SS Armor*.

He's posed leaning against something (a post?, a house?), while scraping mud off his boots with his bayonet. (At least we hope it's mud—maybe he's

friends with the Florian Geyer cavalry guys...)

Another Zeltbahn fan, this time we know he's SS because his collar patches are shown above the top of the quarter. This drape is sculpted a bit longer and more to our nit picky tastes. Nothing is provided for him to lean against, but by happy coincidence (or is it?), he lines up perfect with our dazed friend. The two together would make a cool little vignette.



Dazed & Confused

To populate your new Tamiya StuG G are the following three bad asses; **StuG III crew tropical dress** (35050). The set is composed of one half figure and two full ones. The half is for the commander's hatch, while the seated guy covers the loader's opening. The standing guy is for the back deck or wherever.

All wear the denim Drillichjacke, which was a popular light-weight summer work jacket introduced in the later years of the war. It had a single large pocket which was handy for the odd pipe, map, cigarette or dirty picture. This garment tended to fade and had a look similar to a pair of faded blue jeans. Colors ranged from reed green when new, to faded



Waffen SS Grenadier

grayish green after much wear. They were usually "badged up" with the full complement of insignia. The breast eagle was separately sewn on to a triangular patch, rather than right on the garment.

This jacket was very popular and its use would not have been limited to StuG crews or guys wearing short pants. So think Panther and Panzer IV crews too.

All wear field caps and don't forget if you chose an Italian scheme they were sometimes bleached to an almost off white bone color by the sun. Especially if the wearer was a veteran of the desert campaigns.

The quality was good and the set went together with no problems. Big points scored here on the jacket, and the collars underneath had a nice feel to them. We really liked the guy wiping his forehead. Hey, it gets hot in Italy in the summer!

Our next contestant enjoys long walks in the Ardennes forest, cleaning his FG42 and flanking lightly defended fortifications. Please give a big MMiR welcome to **Fallschirmjäger, Ardennes** (35051)! [Applause]

This wicked little guy is based on one of John Rosengrant's magnificent 1/9 scale sculptures. This was a Kirin item a few years back. Although the 35th scale version isn't quite the übermensch his big brother was, he still cuts quite a figure in the large jump smock worn over a standard great coat. This was pretty common sight in photos of the 3rd Fallschirmjäger Division which fought in the Ardennes in 1944.

He holds his FG 42 at the ready—looking a little like a cowboy who's just drawn a gun from a holster. The Fallschirmjägersgewehr 42 was a popular weapon designed as an assault rifle by the Luftwaffe. They wanted something they could jump out of a plane with, but in later years the gun was employed mostly as a light machine gun, which was a technical no-no. Our man looks like he knows about the design specs as he hoists it up and creeps cautiously forward. The gun didn't weight much, only 4.5 kg, so it could be toted like so.

The sculpting and detail is good all over. The facial expression matches the pose perfectly.

The next two offerings both involved the battle for the Russian city of Kharkov. You know, Kharkov, the city the SS Panzerkorps re-took in 1943 and put the Waffen SS on the map in Hitler's eyes?

If you didn't know, this was a big urban battle fought by the three SS Panzer Divisions that made up the SS Panzerkorps: the 1st SS Panzer Division "Leibstandarte," the 2nd SS Panzer Division "Das Reich" and the 3rd SS Panzer Division "Totenkopf." The whole lot was commanded by SS Obergruppenführer Paul Hausser, who's rather bold plan re-took the city and generally impressed the heck out of everyone—including the Russians. The fighting was extremely fierce and casualties were high on both sides.

The Kharkov battle was also the first time various specialized SS clothing items appeared and that (finally) brings us to our next subject, **Waffen SS MG gunner** (35052).

He wears the heavy SS Parka that first appeared at Kharkov. This was a very warm and bulky item that was lined with different types of fur. It had a big hood that was large enough to be worn over a helmet. Usually the hoods were lined with rabbit fur and the parka itself was lined with brown sheep's wool. Wartime photos show two cuts of this parka. One as an anorak with three buttons to the waist and the other as a parka with eight buttons down the front.

We get the anorak version here and he also wears the matching trousers, which have the very characteristic baggy look of the real thing. These were also



StuG III crew tropical dress

lined and had a special gaiter arrangement around the lower legs. This appears to have not always been worn and the figure does not reflect it.

Both garments were not reversible and brand new they were a deep grayish brown color. They faded to a more neutral shade and also got pretty grubby as they aged.

The figure is decked out as a MG 42 gunner and he's got a nice sculpted section of ammo belt hanging from his neck. He hefts his MG 42 and looks like he means business. Typical of a Kharkov fighter, he's wounded, but he's not gonna let that stop him from chasing a few more Russians.

This is another miniaturized version of a John Rosengrant sculpture and again it was an older Kirin 1/9th scale figure that provided the inspiration. The 35th scale version doesn't quite have the menacing look of the original, but the piece is still effective.

The MG 42 fits into the arms well, but you will have to fiddle with it a bit. There was very little flash and the mold plugs are conveniently located.

The next Kharkov theme piece, is titled **Waffen SS** pair, **Kharkov Warriors** (35053). This depicts an officer having just awarded a Knights Cross to a wounded soldier and the two are shaking hands. There was a lot of this going on after the battle, given the performance of the divisions.



Fallschirmjäger, Ardennes

coat. Only two types of Germans wore these: sentries or officers. The coat was a natural sheepskin color and the white wool interior was often revealed around the lower edge of the coat and the cuffs. Many had fur collars, and this is represented on the figure. These coats were odd in that they didn't use buttons, but rather wooden pegs to fasten the front. How Teutonic.

This coat was also found in a three quarter version and it was a popular item amongst front line troops. Conversion minded modelers might find this a good starting point.

There were no construction or molding problems on the officer figure, but you will have to be very careful aligning the meeting arms of both figures. Test fit them carefully. Leave the one guy handless until after painting, then they can just be placed together.

You end up with very effective vignette and both figures would have dozens of uses by themselves.

Our last Warriors set is a MG 42 team dressed in the more common winter

The soldier is dressed as described above, but is painted wearing SS camo pants. Not likely in this time period, but not impossible. The figure is armed with a Russian PPsh sub machine gun and the distinctive round ammo pouch for the weapon is worn on the front of his belt.


The level of detail here is quite high and were impressed with the way the bandages, sling and Knights Cross were rendered.

The officer fella is lucky enough to be wearing the full length sheepskin great

oversuits of the Wehrmacht and the SS. There are listed as **Waffen SS MG Troops, Winter Dress** (35056), but there is nothing to distinguish them as such—except your paint job. You've got your choice of Army splinter pattern, any of the SS patterns, or dingy white.

Warriors has done well capturing the bulky feel of these uniforms. We liked the way the one figure was sculpted with his hood raised over his M43 cap. On the MG man, a concise hole is provided for the grip of the MG, so it really looks like he's hefting it. Both wear the heavy winter mittens and they carry all the correct gear for an MG team.

These two would make excellent companions for the Verlinden snowbirds listed above.

For any of the Warriors releases check out either the ever popular *The Armed Forces of World War II*, by Andrew Mollo; or the Militaria title, *German Soldiers of World War Two*. 



Kharkov Warriors



Waffen SS MG gunner



Waffen SS MG Troops, Winter Dress



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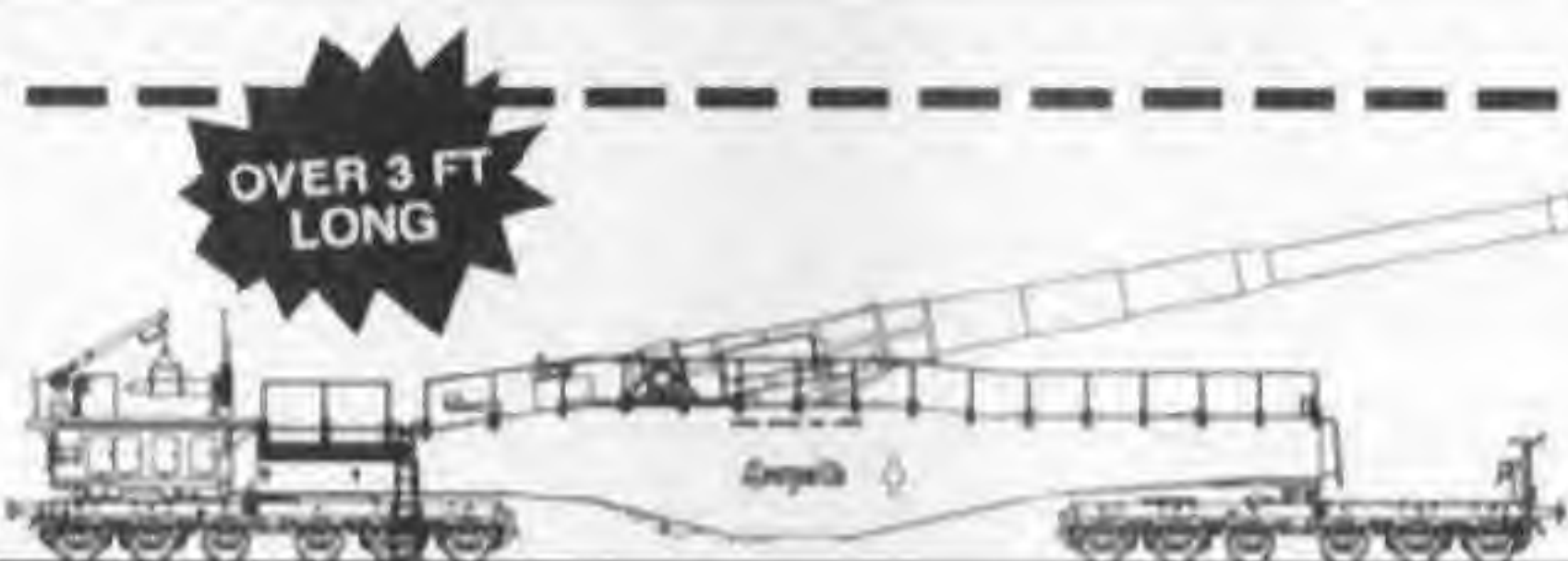
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WANTED: The Tank Magazine, volume 7, number 11, November 1984; also looking for the old Osprey/Vanguard numbers 7, 10, 12, & 14. Call (206) 572-8246.

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FOR SALE: Armor kits, all types, all scales WWI to modern. Send two 32 cent stamps for list. Afrika Korps enthusiast wants books, mags and information on the Italian and German armies in Africa during WWII. Also 1/72, 1/76 and 1/160 scale armor and equipment. Always buying kits send me your list. Peter Rechkemmer, 3410 Sands, El Paso TX 79904.

FOR SALE: ALL KITS ARE UNBUILT, 1/35 DML figure kits. DML Light Seal Support Craft, some Tamiya armor kits, plus Verlinden 1/35 and 120mm kits. For list and price send L.S.A.S.E. to Danny Trepanier, 10070 Beach Rd. Waukegan IL 60087

WANTED: 1/35 scale Tamiya U.S. M10 Tank Destroyer and/or Tamiya Japanese Type 97 Tanks (late version #35137 and/or early version #35075). All kits must be in excellent condition and complete. If any of the kits are available, please send one to: Gary Watson, 8 York Close, Westwood Grange, Cramlington, Northumberland, NE23 9TN, England.

FOR SALE: Older issues Tamiya, Italeri, Testors/Italeri, Airfix, Peerless, etc. 1/35-1/32 Scale. For list send \$1 and SASE to: Robert D. Davis, 518 Mary St., Marion, Ohio 43302

FOR SALE: More Magazines/Books/Videos/Decals/Kits/Floquil etc. Over forty years of acquiring the above items. Send Three dollars for list of military/historical related books/magazines/videos. Mostly WWII to now. Specify EVEN-ODD. Add one dollar for ODDBALL list. Thank You! Bill Whitley, 311 Bundy Avenue, Endicott, NY, 13760-3201. IPMS #20778.

MODELING MAGAZINES AND BOOKS FOR SALE: "IPMS Update", complete run, first to last issue (Jan. 73-March 88), 88 issues in pristine condition \$150; "IPMS Journal", vol. 1&2 complete (12

issues) \$25; "Military in Scale" (UK) Jan. thur Dec. 95 (half price) \$25; Guide to Military Modeling, Guide to Military Vehicles, Guide to Military Dioramas (UK Military Modeling specials, 438 pp, perfect, half-price) all 3 for \$20; German Self Propelled Guns (from Model Art, Japan) perfect, half price \$20; perfect copies of following Schiffer books at half price, German Artillery in World War II \$12.50, History of the Panzer Troops \$12.50, HG Panzer Division \$12.50, Tiger Ace: Life Story of Michael Wittman \$17.50; unopened Tigers in Combat (1/3 off) \$65; Panzerheld: The Story of Michael Wittman \$18; Datafile (UK) German Tanks & Formations 1939-45 (94 pp, half price) \$5; Tanks Illustrated #27 Hitler's Panzers (perfect!) \$10; Hitler's Samurai; Waffen SS in Action & Hitler's Teutonic Knights: SS Panzers in Action (two hardbound volumes at half price) \$17; Rommel: Battles and Campaigns \$10; Hitler's Teutonic Knights: SS Panzers in Action (two hardbound volumes at half price) \$17; Rommel: Battles and Campaigns \$10; Hitler's Legions: German Army Order of Battle, WWII \$9; Encyclopedia of Military Modeling (192 pp, all color) \$10; German Airborne Troops \$10. Prices do not include postage—depending on the size of your order include an additional \$5 or \$10 and any excess will be refunded with your shipment. Jon H. Randolph, 18425 Boone Road, Columbia Station, Ohio 44028.

WANTED: The following kits in 1/35 scale: #35103 Tamiya—Horse drawn German field kitchen; #ES5047 ESCI—Horse drawn German supply wagon; #ES5018 ESCI—German SdKfz 10/4 with 20mm, 30aa flak and crew; #ES5027 ESCI—German SdKfz 10/Hanomag 7 with Panzer Grenadiers; #ES5008 ESCI—SdKfz 10 and M18 light howitzer; #ES5013 ESCI—German Anti-Aircraft with, 20mm flak 30; #HE1132 Heller—French Hotchkiss (H35); #HE1170 Heller—French 50mua (S35); #TM(35104) Tamiya—German Krupp Protze; #DR6014 DML—Waffen SS tank crew; #IT219 Italeri—British Crusader MMIII; #IT221 Italeri—Opel Maultier; #IT323 Italeri—U.S. mil 57mm; #TA(35110) Tamiya—U.S. M8 self-propelled Howitzer; #TA35074 Tamiya—Tent Set-Afrika Korps; #TA35041 Tamiya—British M-3 Grant Mk I; #TA35011 Tamiya—German PzKpfw III Ausf. m/n; #NI-DT3 501 Nichimo—Sherman M4A1; #IT253 Italeri—U.S. M4A3 Sherman; Tamiya—Saladin MKII; #IT250 Italeri—Sherman; Tomy—Patton's Command Vehicle. Will pay for complete unassembled kits—will consider semi-assembled. Herminro Ramirez Jr., 216 West 99 St., apt #17, New York, NY 10025. (212) 665-0377 anytime.

THE HISTORICAL MINIATURE FIGURE SOCIETY OF COLORADO meets on the second Wednesday of each month from 6:30 P.M. to 8:30 P.M. at the Aurora Central Public Library, 14949 East Alameda Drive, Aurora, CO 80012. For more info contact, HMFSC, P.O. Box 461562, Aurora, CO. 80046 (303) 693-7924

WANTED: will pay top \$ for; Italeri or ESCI, Horse drawn convoy, Italeri Panzer 38t and Crusader III, Tamiya German Field Kitchen. Squadron/Signal's Panzer Grenadier Division Gross Deutschland; Panzerjager in Action. Also any Squadron/Signal or Osprey WWII Armor books. Send price, condition, phone, and address to Terry Longoria 8601 E. 17th Ave. Anchorage, Alaska 99504.

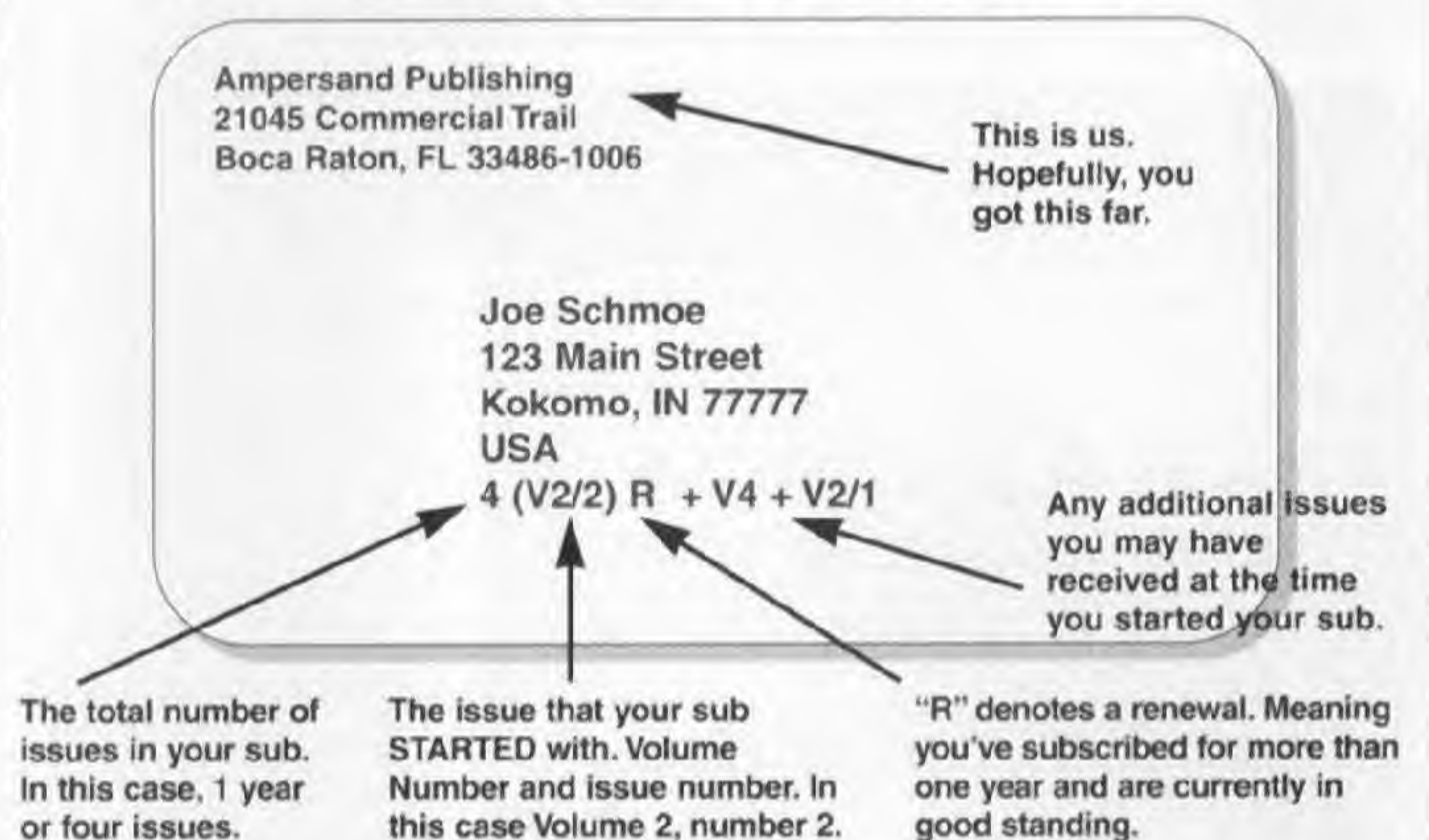
FOR SALE BY AUTHOR: Desert Storm Allied Ground Forces Order of Battle. Covers all U.S. Army, Marine Corps, allied combat units' & support units down to brigade/group level/ 140+ pages' bibliog. \$16 + \$1.74 postage (USA); postage to Canada \$1.85; rest of world, \$4. VA residents add \$.72 sales tax. Checks, money orders (US \$) only. Thomas D. Dinackus, 4719 Major Court, Alexandria, VA 22312.

I know this an armor magazine, but I am getting deeper into armor and need to first get rid of many of my aircraft kits. Possibly some trackheads are also airheads. Most kits are 1/48 scale, will also consider swaps for armor kits in 1/35th scale. Please L.S.A.S.E. for list of kits to: Robert W. Marshall, 12 Bunn Rd., Hamburg, NJ 07419.

WANTED: all those 1/35 scale parts, accessories & kits (built and unbuilt) that you no longer want. Also any IDF reference material you don't want. John Kelsch, 4748A Lee Village, Ft. Campbell KY, 42223.

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